PART OF

A Clinical Lecture

ON

SOME IMPORTANT POINTS IN CONNEXION WITH LITHOTRITY.

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(*Reported by* Mr. G. BUCKSTON BROWNE.)

THERE are two or three subjects in connexion with lithotrity to which I particularly desire to call attention, since they are the result of increased experience in relation to that operation; and I wish to make them prominent because I consider them extremely important with regard to successful practice. I find that those who are unacquainted with the progress which lithotrity has made of late years, and who know it only as it was practised some fifteen or twenty years ago, reproduce the same old objections with which we were so familiar then, or speak of it with the same "faint praise" which was then so current. I do not mean to say that any striking novelties in the instruments or in the system of operating have been recently achieved. The mechanical procedure has probably long been too nearly perfect to permit us to expect results of that kind. But insensibly, as the result of experience and careful observation, modifications of practice have gradually taken place, which have increased the success and improved the after-results, I do not hesitate to say, at least very considerably. What these are I will endeavour briefly to illustrate.

1. The first principle I wish to inculcate in connexion with the management of patients during lithotrity is, that it is desirable to treat any cystitis that may occur during the course of the sittings, especially if it is severe, by freely crushing the stone without delay. I have for some years insisted on the importance of this practice in my teaching. I believe that in this country its value has long been to some extent recognised; but the more I see of the operation, the stronger is my conviction of the great importance of this practice, and the more ready I am to adopt it. Abroad, cystitis is more generally treated by baths, diluents, low diet, and medicine; and the next sitting is postponed until the patient may be, as it is said, in better condition for the instrument. The surgeon fears the effect of introducing a lithotrite into the inflamed bladder, lest the disturbance should increase the inflammation—a result which it appears at first sight not unreasonable to expect. Now the precisely contrary effect is that which occurs. For example, I crush a uric-acid stone once; or it may be twice, with two or three days' interval between. In thirty-six or forty-eight hours after the sitting the pain and frequency of passing water become considerable, the urine is loaded with muco-purulent matter, and it assumes a full-red tint. Some slight febrile condition may or may not be apparent in the patient. Under these circumstances I place him under the influence of ether, crush freely all the large and sharp pieces, and wash out the débris with Mr. Clover's aspirator. Six hours after the urine is much clearer, the muco-pus has almost disappeared, and the patient's general condition is greatly improved. This will happen certainly in nine out of ten of the cases described. I have had the opportunity of demonstrating this to many of my foreign brethren, who are invariably struck with the result. The fact is that the cystitis in these cases is purely a traumatic one, that it is due to the injurious effects of the sharp, hard portions of stone which lie in continuous and close contact with the mucous lining of the bladder, the result of which is that incipient ulcerative action takes place. Crush and remove these, and that instant repair commences, inflammation is rapidly diminished, and the patient is no longer in danger, but is greatly relieved. Even simply changing the situation of the large pieces in the bladder is followed for a few hours by manifest improvement, showing in what manner their presence is injurious. If some large pieces still remain after the fresh crushing, the former symptoms of cystitis reappear in two or three days, and may be again relieved by another sitting, this time probably altogether or nearly so, as a succeeding crushing will, no doubt, dispose of the principal part of the stone, and leave at all events no considerable fragments. This practice has, moreover, an important relation to the after-condition of the patient, as we shall see by and by.

On the other hand, let us suppose a case of lithotrity in which all goes well with the patient, and no fever, no cystitis, &c., happen; still the interval between the sittings should be short, not more than two or three days. You take advantage of the tranquil state of affairs to proceed steadily and carefully, not tempting fortune, but without a day's unnecessary delay. But if cystitis appears you are, as already advised, still less to lose time; and so in either event the operation of lithotrity is soon completed. I rarely exceed now fourteen or sixteen days as the full term which includes all the sittings. Often eight, ten, or twelve suffice.

This practice is no doubt facilitated by the recent improvements in anæsthesia. I have never, as you know, been very well disposed towards the employment of chloroform for any purpose when it could be dispensed with, but I have of late, mainly owing to the improved methods of producing anæsthesia, availed myself of it much more than formerly. I refer to the system which Mr. Clover always pursues, of administering first nitrous oxide for about thirty seconds, and then following with ether vapour. The rapidity and greater safety of the process as compared with that by chloroform, together with the freedom from subsequent sickness usually attained (the latter an advantage of no slight value), have influenced my practice, and I now make anæsthesia the rule and not the exception.* Consequently, also, I avail myself of the opportunity to do a larger amount of crushing than I did when the patient was conscious—a course which, while it is permissible or advantageous in practised hands, is not to be necessarily recommended to the young operator. To him, now as ever, I repeat that success can only be obtained by the greatest caution and prudence. He must not be tempted to introduce the lithotrite so frequently as he sees that I sometimes permit myself (especially in cases of cystitis requiring immediate relief) to do. I still advise you to be content with two, at the most three, introductions of the instrument at a sitting, and thus much only if you are able to make them with tolerable facility.

2. The second principle which is to guide your practice in lithotrity is the importance of detecting at all stages of the procedure any inability on the part of the patient to empty his bladder by his own efforts. Let me say at once that a very little negligence in relation to this matter is the chief cause, beyond all question, of the subsequent troubles which occasionally become evident at an early period after the stone has been removed, and which have constituted, in a certain proportion of cases in elderly men, sources of discredit to the crushing operation. In the cases referred to, the calculus is often removed easily enough, little or no trouble occurs during the procedure; but it becomes evident afterwards that the frequency of passing water is not remedied, and small pains and discomforts continue. The patient leaves his surgeon, and reappears in a few months or even weeks, with clouded, perhaps alkaline, urine, depositing triple phosphates, and with other symptoms more marked than when he left. My friend, Mr. Cadge, who has been reporting of late his valuable experience in relation to this matter, regards these phenomena as not unfrequently due to the escape of a small fragment into a sacculus in the bladder, where it becomes the source of irritation, phosphatic deposit, and occasions the formation of a fresh vesical calculus, with ceaseless discomfort and repetitions of crushing for the patient. I agree with him that this sometimes happens, having had,

* Mr. Clover has employed this method, more or less, for me now about two years and a quarter, and for the last year and a half has done so without exception, using no chloroform whatever. In reply to my inquiry, he writes me that he has during this period administered the gas and ether for me two hundred and thirty times for lithotrity.

like him, ocular and other demonstration of the fact; but I have no hesitation in saying that in the large majority of cases this is not the cause, and that, happily, it is due to another cause, one that is in a very great degree preventable. These after-troubles will appear in patients who have had very little uneasiness antecedent to the operation. Their stones have been small, and their bladders have been in excellent condition; no ground, therefore, can exist for supposing such a patient to be the subject of sacculus in the bladder. Every presumption, indeed, is opposed to that view, because sacculi, as a rule, do not form without the existence of an obstruction to the outflow of urine, which has been in operation for some long period of time.

Now the particular fact which I am going to state is one I was scarcely aware of five years ago. I have long been aware of the necessity of watching carefully for inability to empty the bladder during lithotrity, have long also spoken of the insidious manner in which that inability commences, and pointed out that it must be dealt with by the habitual use of the catheter. But I have only learned during the last few years how extremely small a quantity of urine habitually left behind in an elderly patient's bladder after each act of micturition, provided that he is undergoing, or has just undergone, lithotrity, suffices to lead to phosphatic deposit and to chronic cystitis. You will scarcely believe me that one drachm, or one drachm and a half, only of this residual urine is enough in most such cases to produce the condition so feared and detested by every lithotritist;* and I now add, that if the condition is detected early, and this small quantity is promptly and frequently removed by the patient himself, which he can easily do with a soft *coudée* catheter, almost certainly the dreaded symptoms will not appear.

I have been surprised at the result; not less surprised than I have been at the fact that the patient, who towards the close of lithotrity, or afterwards, is making urine every hour or so, and who, on passing his catheter, finds only one or two drachms behind, often obtains at once an interval of three hours or more. Such a one should pass his instrument at least three times a day until he regains the power to empty the bladder completely by his own efforts. I confess that formerly so small a quantity of urine did not seem to me worth the trouble of removing; as I assumed, on theoretical grounds of course, that it could not be of any importance. I now know that the practice of removing it constitutes for many cases the difference between a permanent success and an ineffectual result and painful future.

Now then, how does the plan of crushing for cystitis, referred to under the preceding head, affect, as I said it would, also this important question which we are now discussing? Thus: it is precisely in those cases where the treatment has been prolonged, or where cystitis, either acute or chronic, has been allowed to go on unchecked, that the inability to empty the bladder is most likely to occur. Again, this inability, once commenced, very rapidly becomes the established order of things in elderly people, unless it is checked at the outset. Once let the bladder be accustomed to the smallest degree of accumulation of urine, and the power to empty itself entirely is, after a certain age, often permanently lost. The best chance of preventing this, and the phosphatic deposit which results, is, in the first instance, to avoid or cut short cystitis during the treatment by lithotrity in the manner described; and, secondly, to teach the patient to empty his bladder himself towards the close of the operative proceedings or immediately after, if the smallest failure to empty it is detected. Once for all, let me say, I cannot exaggerate the importance of these recommendations.

Now, when this tendency to produce phosphatic deposit has been unfortunately established, we are often able to benefit the patient by teaching him to wash out the bladder, by means of an ordinary catheter and bottle, with weak acetate of lead, nitric acid, &c. But of late I have adopted another method, with manifest advantage. I advise the patient (who may or may not be habitually using the catheter to empty his bladder) to use every second or third day the following apparatus:—

(1) A black flexible catheter, No. 11 or No. 12 in size, made thin, and with polished interior, so as to facilitate the passage of débris through it (a great improvement on the ordinary French flexible catheters, which are thick and have often rough interiors), and having a large oval eye on the upper surface of its extremity, which is slightly turned upwards (*coudée*). See Fig. 1.

FIG. 2.

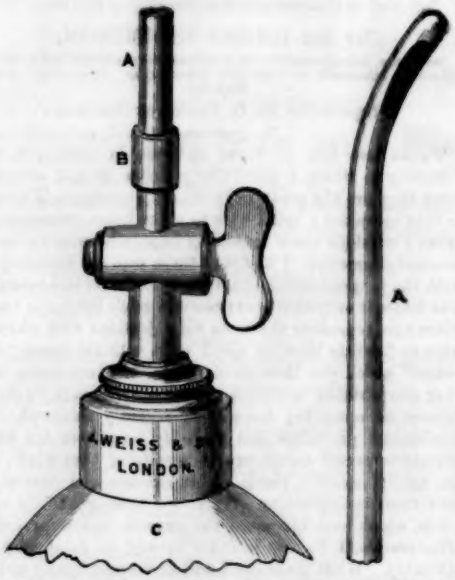

FIG. 1.—The catheter described. The actual measure of the drawing is No. 9. It will be understood that the size indicated is usually No. 12.
FIG. 2.—B, The nozzle of the bottle, which fits *over* the end of the catheter, A.

(2) An eight-ounce india-rubber bottle, with a brass nozzle which fits over the outer end of the catheter, and not into it. The manifest result of this mode of attachment is, that a powerful uninterrupted current can enter and issue from the bladder; indeed it is scarcely possible that débris should remain in the organ under the influence of the action of this apparatus, as anyone can perceive on using it. It may also be used as an aspirator, with a backward and forward current, if desired. (See Fig. 2.) For the patient's own use it is even more easy than the ordinary four-ounce bottle, which I have long been in the habit of desiring such to apply, since the size and freedom of the channel—not narrowed at the point of contact between bottle and catheter—permit the fluid to be propelled with very slight pressure.

There is still one admirable remedy for that low chronic cystitis which is associated with the production of phosphatic calculus in the bladder—viz., the injection, every day or every other day, for a short time only, of a very weak solution of nitrate of silver. About half a grain to four or six ounces of distilled water is amply strong enough; and one or two injections sometimes suffice, in these circumstances, to produce a very notable diminution of the muco-purulent secretion.

* It is not to be supposed that I regard so small a quantity as equally important in a patient whose urine is clear, who is not the subject of any chronic cystitis, and who is not undergoing lithotrity. In an elderly man the presence of a drachm or two of "residual" urine suggests that at some future time he may require the catheter, but certainly it would not yet be necessary.

AT the meeting on December 28th, the Academy of Medicine of Paris proceeded to the election of two corresponding members; one belonging to France and the other to a foreign country. Among the French candidates, M. Raimbert, of Chaleaudun, was elected. And among foreigners, the votes were distributed thus: Number of members present 57; majority 29. Dr. West polled 43 votes, M. Faget, of New Orleans, 13, and M. Hebra, of Vienna, 1. Dr. West was therefore declared elected corresponding member.

A Lecture
ON
MAN IN HIS ANATOMICAL, PHYSICAL, AND PHYSIOLOGICAL ASPECTS.

Introductory to a Course of Lectures on the Institutes of Medicine (Physiology).

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(*Concluded from p. 6.*)

HUMAN ANATOMY derives its fullest interpretation from comparative anatomy and zoology. Man has so many points in common with the lower animals that he cannot conveniently be separated from them. The anatomists of the seventeenth century were so fully convinced of this that they laboured incessantly at comparative anatomy. They comprehended the great fact that man is to be regarded as the epitome of the whole animal kingdom, and that what is obscure in him is illustrated and simplified by an examination of corresponding parts in the animal series. Impressed, moreover, with the dignity of man, they sought, by observation and experiment on the lower animals, to discover the functions performed by the several parts of the human body, with a view to founding thereon a rational system of medicine. Apart from the interest which attaches to the study of comparative anatomy and zoology, there is a very tangible and positive gain. No one can fully appreciate what is meant by human anatomy who is not familiar with the leading principles of zoology and comparative anatomy. Comparative anatomy is to human anatomy what a mirror is to an object reflected in it. In like manner, no one can intelligently administer medicine to a human patient who is ignorant of the effects produced by it on the lower animals. A perfectly educated physician should also be master of the veterinary art. Scientific medicine rests directly on anatomy, human and comparative. To know the function of a part we must be conversant with its structure; to understand disease we must be familiar with the laws of health; to comprehend what is meant by death we must grasp all that is included in the term life.

By anatomy, in its widest sense, is meant a knowledge of all the structures which enter into the formation of all plants and all animals, man in particular. By physiology, in the same sense, is meant a knowledge of the function performed by the several parts of all plants and all animals, man included. Physiology begins where anatomy ends.

An anatomist is expected to know, not only the actual structure of the parts entering into the formation of plants and animals, but their mutual relations in every individual and throughout the organic series. In like manner, a physiologist is expected to be familiar with the functions performed by the parts composing all plants and all animals. Physiology teaches us the nature of life and the laws which govern it. The simpler the form, the lower the life; the more complicated the organism, the higher the life. In man every organ has its peculiar life—the life of the individual representing the aggregate life of all the parts. A living being is living and dying throughout its whole substance and throughout its whole existence. In it "we observe an uninterrupted admission and assimilation of new, and a correspondent separation and expulsion of old particles. The form remains the same; the component particles are continually changing. While this motion lasts, the body is said to be alive; when it has irrecoverably ceased, to be dead."*

The idea of death is terrible to sensitive minds; but, after all, death is only an idea—it is not annihilation. As we did not make ourselves, neither can we annihilate ourselves, or be annihilated. The body, even when full of life, is in great part dead. Seventy per cent. of that body is indeed water—a by no means stable substance; and some recent observers even go the length of asserting that only one-fifth part of the body lives. Granting that only a fifth part of the body lives, even in the heyday of youth, and that dead particles are constantly passing into the body as food and out of the body as excreta and effete matters, the balance, it will be perceived, inclines rather in the direction of death than of life. Assuredly the being of to-day is no longer the being of yesterday. If this be so, it behoves us to familiarise ourselves with death, this representing the major part of our sublunary existence. All will admit that the body instinct with life is a mechanism instinct with beauty; few will deny that that same body is beautiful in sleep. As an anatomist, I will go further and maintain that it is beautiful in death. The pale skeleton leaf is more remarkable in its intricate tracery than the leaf as seen on the tree; and so of a body in death. Of a truth we are fearfully and wonderfully made; and if we wish to behold the absolute perfection of our bodies we must remove the delicately flushed skin and expose bloodvessels, nerves, muscles, and bones in endless and perplexing succession. There is nothing terrible in all this to one who seeks knowledge for its own sake, and who is resolved to know things as they really exist. We do not shrink from the presence of a shell; why should we shrink from the presence of a skeleton? The one is an external, the other an internal support. Equal familiarity with both would make both equally pleasing. The skeleton is ghastly only to the uninformed; to the philosopher it is full of beauty. The dome of the head (that marvellous arch which contains the brain) is one of the finest domes ever constructed: the face is full of buttresses, supports, and side arches, which delight the very soul of the architect; the vertebral column displays Hogarth's line of beauty to perfection, and gives to the trunk its graceful curves and attitudes; the thorax, broad, rounded, and burly, encases as with bars of steel the vital and delicate organs of the heart and lungs; the limbs, slightly curved and twisted and tapering as they run, terminate in fingers and toes of transcendant agility and grace. In a word, the skeleton is to be regarded as a perfect mechanical marvel. It is an epitome of all architecture. It is stronger, firmer, and lighter than any similar structure hitherto devised by man. It displays in itself every form of joint and every form of support, surface, and lever employed in mechanics. Did not the illustrious Paley show that in the skeleton the Deity himself was reflected? What holds true of the skeleton or hard parts of the body is equally true of the soft parts. The bloodvessels and nerves (the one planted in the heart, the other in the brain) ramify from within and from without, like twin trees, whose branches intertwine and interweave with an infinity of love at innumerable points. The bloodvessels convey nutrient material to the tissues and carry effete matters from them; they are to the body what a river is to a city. The nerves convey impressions from all parts of the body to the brain, and the brain through them flashes back intelligent movements to all parts of the body; the nerves are to the body what telegraphic wires are to a people. The muscles, full, rounded, and swelling, give strength, symmetry, and beauty to the form; they are to the body what a steam engine is to machinery. The lymphatics meander everywhere and overlie the body in a rich network; they are to the body what the leaves and roots are to a plant—they absorb the food on which the body lives. If we go deeper we find other systems. There is the respiratory system, where the blood is purified and changed from a dark purple to a bright scarlet; the digestive system, where the food is cooked and metamorphosed so as to be readily assimilated; the reproductive system, where the future being is mysteriously elaborated; the secretory system, where certain silent-working glands manufacture juices which give a piquancy to all the fluids and solids of the body; and the excretory system, which may justly be termed the scavenger system, inasmuch as it removes from the body politic the effete matters which if retained would prove injurious, if not destructive.

To see these several systems, and to make out and comprehend their mutual relations, we must anatomise. We must draw aside the veil. But this unveiling reveals a higher, or, if you will, a deeper beauty—deeper because

* Lectures on Physiology, Zoology, and the Natural History of Man, by Sir Wm. Lawrence, Bart.; p. 83.

hidden. The interior of a watch is more remarkable than its exterior, and this is a hundredfold more true of our own bodies. The painter and sculptor seize upon externalities, and enchant us with their glowing colours and flowing outlines; the anatomist lays bare the beauty which the integument imperfectly conceals. No one can be a painter or a sculptor who is not also an anatomist; and no one can admire the living body as he ought who turns away from and despises the dead body. Every part of the dead body is replete with beauty. If I were to show you the structure of the heart, or indeed of any one of the organs, you must admire.

As a knowledge of anatomy is necessary to a knowledge of physiology, so a knowledge of physiology is necessary to a knowledge of health. Disease is health perverted, and can only be understood through anatomy and physiology, human and comparative. Anatomy in the present day relies for its advancement upon the scalpel and microscope; physiology upon physics and chemistry. To know the structure and uses of a part, we must be able not only to anatomise and analyse its substance, but also to explain its movements. As in anatomy and physiology we cannot escape from matter, so we cannot escape from physics. Everything that lives is material. But material living things display physical properties: living plants and animals are heavy, elastic, porous; many animals display in their bodies the various forms of levers, the pulley, hydrostatic and pneumatic arrangements, and a host of mechanical contrivances. While we inhabit the earth, we are as much a part of it as any of its mountains or rivers. In this sense we are citizens of the world—sons and daughters of the universe. It is this intimate connexion with the matter and force of the universe which makes us amenable to climatic changes; which makes us laugh in the sunshine, and weep in the shade. There is nothing in nature which does not find an echo in man. If the wind whispers in the woodland or softly trembles in the Æolian harp, a responsive chord is instantly struck; and if the lightnings flash and the thunders roll, an innate dread, commensurate with the sublimity of the occasion, is at once engendered.

As the matter of which our bodies is composed is to be regarded as a special contribution from our Maker, so the mind which actuates our bodies is to be regarded as an emanation from the great Mind which rules the universe. In our bodies we behold the perfection of matter; in our minds, alas! only the refuse of a divine attribute. Man, great and grand as he is, is somehow disjointed and broken. Whereas external nature holds on the even tenour of its way, he is liable to disease and dissolution. Whereas the vast mind of the great Lawgiver is true to his sublime purpose and the final issue of things, the mind of man is painfully vacillating and weak. It is as a stray beam to the mighty effulgence of the sun. Still man, even fallen man, is a mighty creature; and that science which deals even with his physical part is a great science. No form of education, however exalted, can afford to set aside anatomy and physiology, and, by implication, natural history, physics, and chemistry. The leading spirits of the great European universities have long seen and felt this, and it seems to me the day is not far distant when these subjects will be taught in every seminary in the land. Already Cambridge has what is known as its "Natural Science Tripos," in which a Master of Arts degree is conferred for efficiency in natural history, geology, chemistry, anatomy, physiology, physics, botany, and cognate subjects.

The physicist and chemist are necessary to the anatomist and physiologist; and I cannot help observing that the founders of the chairs in the University of St. Andrews have shown much sagacity and wisdom in combining anatomy and medicine, and in associating therewith natural history and chemistry, and indirectly natural philosophy. The circle of the sciences widens every day, and Britain begins to feel that unless every department of learning is sedulously cultivated she will cease to be a leader among nations and a pioneer in civilisation and progress. In this we have an explanation of the not unreasonable clamour for science schools, education chairs, and—last, not least—State medicine and hygiene. The period has at length arrived when a knowledge of the laws of health is imperative, not only as regards the leaders of the people, but the people themselves. Ignorance of these laws has already produced incalculable mischief; and civilisation cannot hope to advance in squalor and filth, for these are synonyms of disease and death. Our large manufacturing towns are scourged with pestilential fevers which science can well avert, and there is no reason why the stunted populations of hard-working and crowded centres should die prematurely. It is lamentable to find comparatively well-educated people wholly, or next to wholly, ignorant of natural history, botany, chemistry, and physics, and—what is more inexplicable—of the structure and uses of their own bodies. How, I might inquire, as a medical man, can a people hope to be healthy who are unacquainted with the laws of health? How can brains be functionally active which are imperfectly nourished, or, what is just as bad, overfed? Is it possible to have a healthy mind in an unhealthy body? Is there no truth in the Latin maxim, *Sana mens in corpore sano?* The alarming increase of insanity of late years conclusively proves that a knowledge of medicine is becoming imperative, not only in professional men, but in all classes of society. The clergyman and jurist should know medicine, if only for the purposes of illustration. The question frequently asked of late years is, "But how is medicine, and the subjects included in medicine, to be made interesting to the many?" I reply, By making them all-embracing. Let us look at man not as an isolated individual, a knowledge of whom can only be acquired in the dissecting-room. Let us look at him as one of the great animal series, and let us contemplate that series in its infinite ramifications and in its totality. Let us regard animals as the indirect product of plants, and plants as the direct product of inorganic matter. Our interest will increase as the subject widens. The more we look into Nature the more we shall love her. No one who observes and thinks can be insensible to the beauty of the mineral kingdom with its galaxy of precious stones; no one who watches the flower open up its innermost recesses to the sun but must feel there is a sympathy between them; no one who looks into the clear blue waters and observes the sea-anemones coquettishly conceal and as coquettishly display their delicate charms, but must know they are in perfect harmony with their surroundings. There is a poetry in the plant and the lower forms of animal life, clinging to the ground like living anchors; for fixity begets helplessness, and helplessness sympathy. But there is a far higher poetry in plants and animals which move, for here there is sensibility and reciprocation. The sensitive plant responds to your touch, and is aware of your presence. The floating medusa pulsates with life and joy. The sunlight and the breeze evoke activity where there is life. The plant throws off its seed to be scattered by the winds. The same wind ravishes one flower and fructifies another. The bee, on busy wing intent on gathering nectar, assists in the fructifying process. The bird, flitting from tree to tree, swallows the dainty fruit and plants it in some inaccessible but suitable region. The sunlight, the breeze, the flower, the fruit, and the bird are all for man. Is it possible, then, that one so highly favoured can take no interest in the beings among which he lives and moves? I hold apathy on this head to be wholly inexcusable. If apathy does exist, I believe it to be entirely due to the fact that we are not taught when young to study the great book of Nature. The mighty volume is not unfolded as it ought to be when our minds are most susceptible. We are not encouraged to examine plants and animals as living things which have a mission to perform, which have a geographical distribution in time and space, and which are useful to man, not only as affording healthful recreation to the mind, but aliment and clothing to the body. Where would man be if left to himself? He is only great as the greatest of all created beings. It is dependence and interdependence which make life enjoyable. We must live, not for ourselves only, but for others; others in the widest and best sense—to wit, the whole animated kingdom. Happiness flies from us in proportion as we narrow our sympathies. The more I reflect upon the subject of education the more I am convinced that one of the grandest avenues of human knowledge is at present all but blocked up by ignorance, superstition, and prejudice. I refer to the great avenue of natural science. Languages, logic, arithmetic, mathematics, &c. are all necessary; but they should have as their foundation natural history, anatomy, physiology, chemistry, botany, and physics. What more natural than to teach children that there is a world outside of themselves—a sky, a sun, a moon, a plethora of stars, a wide expanse of land, a vast ever-changing ocean,

an arcadia of plants, and an interminable series of animals which live and die as they do.

A child, when introduced into the world, should be taught his place in nature. The flower, the butterfly, the bird, and the beast are the natural companions of the child; why should they not be properly introduced to each other? If children and youths were taught to observe the habitats of plants and animals and the purposes subserved by them, they would naturally be tempted to examine their structure. In this they would have congenial occupation, and would form habits of close observation and reflection, which could not fail to be eminently serviceable to them in after-life. When mind and body are both expanding, healthful recreation should be blended with study. I can conceive nothing more painful than to see a ruddy energetic child puzzling over a sum in a corner. The same child, a thousand to one, would take delight in pulling a flower, or in catching an insect, and very little coaxing would be required to get him to dismember and examine one or both. This tendency to break up, and in some senses to destroy, only requires direction to produce a race of anatomists and physiologists of which Britain would be justly proud. Book lore is all very well; I have nothing to say against that. Everything is good in its own particular season. What I complain of is the rearing of British youth as if there were no green fields, no flowers, no birds, no beasts, no design, no great First Cause. We do not want mere bookworms—men who dogmatise from their closets and contemplate everything through coloured glass. We want active, earnest, practical workers, who take nature as she is, and who observe, think, reflect, and act for themselves. We ought to know, not only our place in nature, but how to keep it. We ought to work at, and not dream about, art. Nature and art are both practical. If there is power in us, it ought to manifest itself in a practical form; it ought to resolve itself into motion in one direction or other. Whichever direction this motion takes ultimately, I sincerely hope that in our youth, at least, it may be spent in contemplating God's most marvellous works. Let us seek, and we shall assuredly find

> "Tongues in trees, books in the running brooks,
> Sermons in stones, and good in everything."

ON THE TREATMENT OF ACUTE ORCHITIS BY PUNCTURE OF THE TESTIS.

BY HENRY SMITH,
SURGEON TO KING'S COLLEGE HOSPITAL.

IN the year 1864 I brought before the profession, in the pages of THE LANCET, a method of treating acute orchitis, which in my simplicity I imagined to be original. This consisted in puncturing the body of the inflamed organ by a single incision, extending in depth to half or three-quarters of an inch. My friend, Dr. Bumstead of New York, very properly took me to task in his work on Venereal Diseases for assuming it to be original, and pointed out that Vidal de Cassis had already long before advocated a precisely similar mode of treatment, had adopted it "with impunity in four hundred cases, and claims for it preference to all other modes of treatment."

Since this period I suppose I must have performed this operation in more than one thousand cases, and with results which have satisfied me equally with the French surgeon. Hundreds of my pupils at King's College Hospital have witnessed this treatment, and thus the results have been pretty satisfactorily ascertained, and I think I am correct in stating that the majority of these gentlemen have carried with them into their practice the conviction that this plan is the most speedy and efficient mode of treating this painful affection.

It is only in cases of the most acute form of the disease that I recommend this treatment, and in by far the majority of these instances I have found that the relief given to the pain in the testicle itself is very marked, and almost instantaneous; in fact, so much so that patients who come to the hospital in severe agony are enabled to walk out of the building comparatively free from pain, and in many instances joking about the treatment to which they have been subjected. I have had patients return to me for similar treatment to the other testis, after undergoing the operation on the one at some previous time, and than this there can be no better proof of their estimation of the relief which is produced by the puncture.

When questioned by pupils as to the *modus operandi* of the remedy, I have answered that the sudden relief from acute pain is due to the circumstance that the unyielding tunica albuginea is freely incised, and that the tension is thus taken off the compressed and swollen testis; in some instances there is more or less serum effused into the cavity of the tunica vaginalis, and the withdrawal of this greatly assists in giving relief, but in many instances there is hardly any effusion of serum. In most cases undoubtedly the loss of blood produced is an important factor in the rapid subsidence of pain, but in some cases so little bleeding is produced that the relief cannot be explained in this way. Vidal de Cassis explained the sudden relief by the compression being taken off the testis through division of the tunica albuginea. In the old-fashioned treatment which I was taught to adopt, large quantities of leeches and nauseating doses of antimony were the chief ingredients; yet nothing like the speedy and effectual relief from puncture was produced, and every now and then a violent attack of erysipelas would be brought about by the leeches. As a general rule the puncture is productive of so much relief to pain that no other treatment is required, except to support the part, and occasionally to use compression by strapping—a means well calculated to diminish the swelling, which is scarcely at all reduced by the puncture, and the persistence of which annoys the patient.

I have seen none of the bad results from puncture as have been pourtrayed by the fertile imaginations of alarmists, who were haunted in their dreams by visions of hernia testis, atrophy of the organ, and emasculation. I had once a case of a slight protrusion of the "tubuli seminiferi," well known to my pupils; but this occurred in a young strumous man who, on the day following the operation, received a severe blow on the scrotum.

I have not met with a case of atrophy of the testis, but I have seen two cases in private practice, in young healthy persons, where the testis was quite destroyed from the violent inflammation of the organ, and where the good old-fashioned plan of leeches, &c., was used; in all probability puncturing the testis in these cases would, by relieving the inflammation, have prevented the destruction of the organ.

On looking into Mr. Holmes's new work on Surgery, I find, at page 797, the following remarks in reference to the treatment of orchitis:—"I never saw any need for puncturing the testicle, nor have observed any relief from following the practice in the very few cases in which I have seen it tried, nor can I see why it should relieve the pain." I must confess I was much astonished to read this statement when it was pointed out to me by one of my old assistants who had seen me practise this operation in a great number of instances; and it is difficult to reconcile it with that enunciated by Vidal de Cassis, and with the conclusions arrived at by myself after the experience of a thousand cases. Either the French surgeon or myself must have been grievously deceived if Mr. Holmes be correct in his observations, or the difference in our conclusions about a simple matter of fact, so capable of demonstration, must be accounted for in another way; and the only explanation I can conceive to be at all reasonable is that Mr. Holmes, in the very few cases in which he has "seen it tried," did not have the opportunity of witnessing the remedy applied in the cases for which it is adapted, or that the operation itself was not employed in the manner pointed out by Vidal and myself. It does not appear, too, that Mr. Holmes has actually practised the treatment himself with his own hands, but has merely "seen it tried" in "very few" cases. This, possibly, may be the reason for the great difference in the results noticed. Possibly, however, I may have been too much and easily pleased by the treatment especially advocated by myself, and have seen results with too favourable eyes, and thus have been led into error. With a view, therefore, to prevent this error, and to see how far independent observers agree with me, I have asked for the opinions of several independent witnesses—gentlemen who

have held the post of house-surgeon at our hospital, and who have been of necessity closely associated with me in my practice. I have made inquiries of six of these gentlemen, all of whom have had numerous opportunities of seeing me practise the method in question, and have been enabled to watch the cases afterwards, and the result of their observations is as follows:—

Mr. Rose, formerly our house-surgeon, and now surgeon to the Royal Free Hospital, says: "I have been frequently in the habit of adopting your plan of treatment at the Royal Free Hospital, and the instant relief from pain and subsequent rapid subsidence of inflammation are the undoubted results of the operation."

Mr. Barrow, our present surgical registrar and former house-surgeon, says: "I have seen you perform your operation of puncturing the testicle in acute orchitis in a large number of cases, and in every instance a rapid subsidence of all acute symptoms has followed, so much so that the patient has returned in two days almost perfectly cured."

Mr. Andrew Duncan, formerly our house-surgeon, and now resident surgeon at the Stanhope-street Dispensary, writes: "I had the opportunity of seeing numerous patients weekly treated by puncture of the organ for acute orchitis; it affords immediate relief from pain, and also is the best plan of treatment in such cases."

Mr. Richardson Cross, our former house-surgeon, now resident surgeon at the St. Pancras Dispensary, writes: "The hospital out-patient does not usually come under treatment until symptoms so painful as to demand immediate relief have supervened. Such relief I have seen given most decidedly by puncture at your hands in many cases, without the occurrence of any untoward result."

Mr. McGill, of Leeds, formerly our house-surgeon, writes, with reference to this one point, the relief from pain: "I feel sure that the relief which, in the majority of cases, is undoubtedly obtained, is due to the evacuation of fluid from the tunica vaginalis." This gentleman's testimony is the more valuable, inasmuch as he contents himself with simply drawing off the fluid from the tunica vaginalis, and does not agree with me in the necessity of puncturing the testicle itself. It will be interesting to see if Mr. McGill will adhere to this view after he has had the experience of more than a thousand cases.

Mr. Footner, our present house-surgeon, writes: "My experience of the results of puncture of the testicle in acute orchitis is, that it is eminently satisfactory if used in suitable cases. By suitable cases, I mean those in which the tension is very great, the pain intense, and in which inflammation exists to a high degree. The relief from acute pain is most marked and almost instantaneous."

Now, here we have half a dozen men, able and independent, who I know would not make a statement for the sake of pleasing me or anyone else, entirely agreeing on the one point about which I have sought information—viz., the relief of pain. These gentlemen, too, have each of them seen and watched a large number of these cases, and the results witnessed are exactly those testified to by Vidal de Cassis and myself. I must leave it to those who are interested in this matter to explain how it is that Mr. Holmes should have arrived at a totally different conclusion on a simple matter of fact, which can be demonstrated so readily. Mr. Holmes holds such a high position as a surgical writer that it is doubly incumbent on him, as well as upon other authorities equally eminent, not to hazard an opinion upon insufficient data respecting any point in surgical practice. In the present instance it is quite clear that either Mr. Holmes or Vidal de Cassis, with the six witnesses above quoted and myself, must be in error. In any court of justice where evidence is received, the weight of this evidence, admitting the witnesses to be truthful, would be strongly against Mr. Holmes, and I have no hesitation in saying that if he carefully inquires into this matter by personal experience, he will, in the next edition of his work, come to a different conclusion respecting the treatment of orchitis by puncture.

Wimpole-street.

AT a recent meeting in Leeds, convened for the purpose of promoting the building of new churches to meet the growing wants of the borough, Dr. Chadwick subscribed £1000, and Dr. Heaton £250.

PROGRESSIVE MUSCULAR ATROPHY.

BY WILLIAM ALEXANDER, M.D.,
VISITING SURGEON; AND
A. M. S. HAMILTON, M.D., M.R.C.S. ENG.,
SENIOR HOUSE-SURGEON TO THE LIVERPOOL WORKHOUSE HOSPITAL.

(*Concluded from p.* 11.)

CASE 3.—W. S——, aged thirty, a sailor, was admitted into the Liverpool Workhouse Hospital on the 8th of April, 1874.

Family and previous history.—Patient is not aware that any of his relations suffered from paralysis or from any form of nervous disorder. For the last fifteen years he has sailed to India, China, and Japan, during which period he drank heavily. There is no history or symptom of his ever having had syphilis, the only disease he remembers suffering from being typhus. Two months and a half ago, while at sea, his bowels became obstinately constipated, which constipation lasted but a short time. He dates his present illness from this period, as soon after a pain of intermittent severity was experienced in the "small of his back," accompanied with some loss of appetite. A little more than a month previous to admission, on one occasion, whilst crossing the Atlantic, he was exposed to severe cold. Next day he felt that his arms were "stiff," and that the pain had extended from the "small of his back" to his shoulders and chest, and that it was much increased in severity. During the succeeding week loss of power and gradual wasting of the arms and shoulders ensued.

State on admission.—His face has the appearance of a healthy, robust, and weather-beaten sailor. His bowels are regular, his appetite good, and his tongue clean. Neither his history nor his appearance showed any evidence of the existence of lead-poisoning. On the patient being stripped we were at once struck by the great wasting of the muscles of the chest and of both shoulders, especially of the right. On examining the right shoulder more closely we found that the wasting affected the great pectoral, deltoid, supra-spinatus, and infra-spinatus muscles, the biceps and triceps apparently retaining their normal size. There was some wasting of the flexors of the forearm, and the thenar eminence had disappeared. There was a slight and appreciable wasting of the muscles of the hypothenar eminence. On exposure to cold the wasted muscles presented a fibrillary tremor. The deltoid muscle seemed to have a little power left, as he could raise the arm about three inches from the side. There was no apparent wasting or loss of power of the trapezius. He could both elevate and shrug his shoulders. Pronation and supination, although weak, were perfect. He could not circumduct his thumb nor bring it into apposition with the little finger. When told to button his vest with the right hand, he would endeavour to do so by jerking his shoulders and body first backwards and then forwards. His arm was thus thrown across the front of the body, and, if his fingers managed to catch the button, they for a moment made a futile attempt to complete the act, but as soon as the impetus that placed the arm in that position had ceased, the arm dropped again to the side, the feeble fingers that grasped the button being unable to support the weight of the limb. The left arm presented the same appearance to a less degree, and the loss of power was proportionally less. The patient thinks that the disease commenced in both arms at the same time, but that in the left it progressed less rapidly than in the right arm. There is a slight hesitancy of speech, which patient says did not exist before the disease began, and he complains of a huskiness of voice. Urine: sp. gr. 1021; no albumen.

Treatment and progress of case.—Patient was ordered Easton's syrup, a drachm three times a day, shampooing, and the application of the constant current twice daily. On April 28th, twenty days after admission, he left the hospital in the following condition. Both thenar eminences were increased in size and in power, the flexors of the forearm and the muscles of the shoulder showing a slight but de-

cided improvement. The pains in the loins and shoulders had completely disappeared.

CASE 4.—P. H——, aged sixty-one, corn-porter, married, admitted into the Liverpool Workhouse Hospital March 5th, 1875.

Family and previous history.—He believes that none of his friends had suffered from any nervous disease. He had ague twenty-five years ago. When a young man he got intoxicated at least once a week, but for the last seven years he has been comparatively sober. The muscles of the thumb and little finger were subjected to daily pressure for many years past in turning the handle of a windlass, and he had sometimes to lift pretty heavy weights. No history of injury. In 1869 he first noticed a numbness in the fingers of the left hand, most marked on, and for some time after, awaking from sleep. This continued with intermissions till 1871, when the hand became weak. He could not grasp the bags with the same power as formerly, and, on looking for the cause, a distinct diminution of the "ball of the thumb" was seen. The right hand became impaired in the same way, but he could not give any reliable details as to the time of the onset of the symptoms.

State on admission.—Complains of a feeling of "pins and needles" in the points of the fingers of both hands, the feeling being increased by cold. He has pain in the left shoulder. The right thenar eminence is wasted, and there is some wasting of the interosseous spaces of the metacarpal bones on the palmar aspect; the left thenar eminence is less wasted than the right; no wasting of the other muscles of the body. He cannot circumduct the right thumb, nor apply its tip to that of the little finger. He can shut the fingers of the right hand with very little force, the middle finger possessing a little more power than the others. In the left hand he can touch the little finger with the point of the thumb, and can circumduct the thumb feebly. Appetite and general health good. Urine: sp. gr. 1022; no albumen.

Treatment.—Easton's syrup, shampooing, and continuous current. On June 1st a prominence of left acromion process was observed, which was found to be due to wasting of deltoid. Fibrillary tremors were now observed for the first time. The muscles of the hand are improved both in bulk and in the power of motion. He can now approximate the right thumb to the little finger. Patient took his own discharge towards the end of June, his general and local conditions steadily improving.

CASE 5.—James R——, aged thirty-two, labourer, single, admitted into the Liverpool Workhouse Hospital Feb. 15th, 1856.

Family and previous history.—No evidence of any hereditary disease. Parents long-lived, neither of them dying of paralysis. Fifteen months ago, in lifting some iron castings, he felt a severe pain in his back, about the middle dorsal region, which "came and went" for three months, when it became constant, and extended to the left arm. Five weeks before admission he felt a tingling and loss of power in the fingers of the left hand.

State on admission.—Patient has a pale and anxious expression of countenance; pulse 80; appetite bad; tongue furred. There is no difference in the size of the arms; left forearm a little below elbow is nearly an inch less in circumference than the right; wasting seems general, and there is no proportionate diminution in power; left thenar eminence wasted, soft, and flabby. He cannot approximate the left thumb to the little finger; the fingers are partially flexed, and the power of grasping with the left hand is very feeble compared with the right.

Treatment.—Same as in the other cases.

Up to the 29th of March he remained in almost the same condition. On this day he complained very much of his back, which had been examined before, but nothing had been observed. A tumour was now seen extending from about the sixth cervical to the third dorsal vertebra. It was distinctly fluctuating, and could be pushed upwards and downwards beneath the muscles without causing much pain. He complained now of loss of power in his legs, so much so that he could not get out of bed. When the right leg is pinched he says he is "tickled"; when the left, he feels pain. There is numbness in the legs and body as far up as the lower margin of the ribs; no feeling of constriction round the body; bowels constipated; pulse 120.

April 6th.—Loss of power of right hand; total loss of movement in left hand; difficulty in passing water; temperature 102° F. Incontinence of urine and fæces set in shortly after; and for some hours before his death, which occurred on April 15th, he was delirious.

Post-mortem examination.—An abscess was found resting upon the right laminæ of the last cervical and the upper three dorsal vertebræ, and penetrating between these laminæ into the spinal canal. The periosteum of these bones was destroyed, leaving them rough and bare, bathed in the surrounding pus.

On account of the extremely softened state of the cord it could not be hardened sufficiently to allow of a perfectly satisfactory microscopical examination, but it was possible to make out the absence of granular degeneration or atrophy of the ganglion cells of the grey cornua and of the nerve-fibres so well seen in Case 1.

REMARKS.—The above-described cases exemplify the most constant and characteristic symptoms of progressive muscular atrophy. Cases 4, 1, and 2, were photographed shortly after admission, and their photographs show the disease in three stages. In Case 4 the hands alone are affected, in Case 1 the disease has gone some distance up the arms, and in Case 2 the patient stands with his head hanging down and his arms, as if lifeless, kept out from the side by iron supports. They all resemble each other in the preliminary nervous symptoms, in the gradual onset and course, in the upper extremities being principally affected, in the absence of any hereditary history or of any specific taint, in the at least temporary improvement from the use of the continuous current and shampooing, and in the capricious manner in which the disease advanced. In one case the disease simultaneously attacks both hands, in another it attacks one hand, and a short time after jumps across to the other; in another it goes from one hand round by the shoulders down the opposite limb, and in a fourth it commences in the shoulder. The urine was only abnormal in one, and a microscopical examination of the kidneys only showed a doubtful commencing cirrhosis.

The subject of muscular atrophy has been investigated by men now celebrated in the profession; many hundreds of recorded cases have been analysed by them, and thus various laws of the disease have been evolved. We will not attempt to follow in their track, but we will simply state our conclusions regarding the pathology of the disease—conclusions based on our own cases alone, and supported or not contradicted by the examination of other recorded cases.

In the first place, has the disease a muscular or a nervous origin? The balance appears to us to be on the side of the latter opinion, and for the following reasons.

1st. The onset of the disease was in all these cases characterised by symptoms referable to the nervous system—viz., a feeling of "pins and needles," neuralgic pains, numbness, and susceptibility to slight changes of temperature in the affected part.

2nd. On the muscular theory, how can we explain its peculiar course—viz., its invading one hand, passing up the arm for some distance, and then affecting the opposite hand? Why does it attack one bunch of muscles and pass by another bunch in close contiguity? If it is said to affect them like cancer, &c., it ought to proceed according to similar laws; but it does not. On the theory that it is a disease of the cord, its course, we submit, is just what we ought to expect. If we suppose a diseased action to have commenced at a certain point in the cord, from that point it will spread upwards, downwards, and laterally. In the present state of our knowledge there is no reason why it should not spread in one case more laterally, or more upwards, or more downwards than it may in one of these directions or another, hence the variations in the location of the paralysis in such cases.

3rd. The treatment that was most successful in restoring bulk and form to the wasted muscles was such as we are led to believe would accelerate their destruction were they the seat of active disease, and is similar to the probable cause of the disease—viz., overwork of the affected part. The treatment is also similar to that most effectual in paralysis of muscles of undoubted central origin.

4th. The disease in the cord was much in advance of the peripheral lesion. Regions of the cord were gravely diseased, whilst the muscles that take their nervous origin from that region showed no sign of either functional or

organic change. Were the disease muscular, and did it react on the cord, we would naturally expect to find the muscular lesion more extensive than the spinal.

5th.—The fact that spinal cords, taken from patients who had died from this disease, have, even after a rough microscopical examination, been pronounced healthy, is no objection to the theory of the nervous origin, because the cord of Case 1 to touch and sight showed no disease, whilst all the cords that have been examined lately by competent and careful miscroscopists show extensive and pretty uniform changes.

We publish the last case because we think it may throw some light, although perhaps a false light, on the other cases. For a part of its course it was indistinguishable from one of progressive muscular atrophy, during which time there is now no doubt but that the moderate pressure of the abscess on the cord was the cause of the symptoms. With dilated bloodvessels coated outside by a tolerably thick layer of apparently effused material, and with a dilated central canal filled with proliferating cells, and not with mere débris, may not a gradually increasing and extending pressure bring about and extend the disease named progressive muscular atrophy, and may not the effusion be the result of a chronic inflammatory action?

Liverpool.

CASE OF

CONCUSSION OF THE SPINAL CORD;

WITH REMARKS.

BY JOHN GAY, F.R.C.S.,

SURGEON TO THE GREAT NORTHERN HOSPITAL.

Notes of the Case by MR. CARTER *and* MR. CHAPMAN, *Resident Surgeons.*

JAMES S——, labourer, aged fifty-five, was admitted into the Great Northern Hospital on August 19th. On the day before, he fell from a load of barley about twelve feet on to his shoulder and neck. After being driven home, he was able to walk a few feet, and afterwards passed a motion voluntarily, but by rolling himself on to a utensil by the side of the bed. From that time his limbs became gradually weaker, and accompanied with shooting pains in the body and legs.

On admission, sensation below the shoulders and arms was found to be diminished, and voluntary motion very limited. During inspiration the diaphragm and sterno-mastoid muscles acted powerfully, the head was tilted back and chin thrown forward, whilst the intercostal muscles were passive and the spaces strongly sucked in. There wa no deformity of the spine. The pupils were contracted and the tongue dry; respiration 24 to the minute, and rather irregular; pulse 60, and regular. He was placed on a water-bed, and ordered milk diet.

Aug. 20th.—Passed a restless night. His lips are rather livid. Tongue cleaner. His bowels have not acted, nor has he passed urine. On using a catheter, the urine passed in accordance with the action of the diaphragm, and seemingly without any aid from the bladder itself. He has now lost all voluntary power in his legs. Pulse 88; temperature 102°.

21st.—Has passed a better night, but suffers from a sense of weight in his chest and shoulders, which, he says, interferes with his power of speech. His bowels were open slightly in the night. Extremities cold. Pulse 84, regular; temperature 99·2°.

22nd.—Although more comfortable, his tongue has again become dry and furred. He has been dreaming vividly, and is slightly delirious. He sometimes sees things double; no pain in his head. Temperature has risen to 101·8°. Sensation in the legs is still further diminished.

23rd.—Has been delirious at times, and restless during the night. Complains of great pain in both arms. Skin very hot. Temperature 101·8°; pulse 88, weak.

24th.—Still restless and slightly delirious; pupils contracted. Skin of trunk hot; extremities cold. Pain extended from the arms to his shoulders. Bowels acted after an enema.

26th.—Pain less in the arms, but increased at the back of the neck. Temperature 100·4°. He has slight sensation in his legs.

28th.—Respiration 14, very deep and irregular. Tongue dry and covered with a yellowish fur. Bowels confined.

30th.—His motions are now sometimes passed involuntarily, but the bladder has recovered its power.

31st.—To-day he has incontinence of urine with priapism, and his legs are rigid.

Sept. 1st.—Urine drawn off twice a day, loaded with urates. He has still slight sensation in his legs, which he has never entirely lost, but there is no motion whatever; his legs have been given to involuntary twitching. The bladder is now syringed out with a solution of sulphurous acid (one in twenty-eight).

5th.—The urine is still thick, and has assumed an alkaline reaction. In addition to the twitching of the legs, the thighs are drawn up spasmodically, and he complains of severe pains down the back and legs. Urine and motions are still passed involuntarily.

8th.—Complains of pain in the left side of his neck, extending to the shoulder, which is due to two cervical glands which have become swollen; one is tender on pressure. The arms are still painful.

11th.—The pain in the neck (which was very severe on the 9th) has subsided, and the glands are less swollen. He can now feel slightly the injection into the bladder, and there is tenderness on pressure over the hypogastric region.

13th.—Can retain his motions to-day a little for the first time.

20th.—There is now a perceptible recovery of power in his legs. He can hold both his water and motions better, and is altogether stronger.

By the 30th both sensation and motion had much improved, his appetite was returning, and he slept well. The general improvement continued, so that on the 25th of October he was able to sit up in a chair for an hour or two; beyond this his legs became painful. Syringing of the bladder was discontinued on the 27th, when the bowels and bladder had quite regained their functions, and the urine was clear and healthy. On the 20th of November he began to walk up and down the ward with assistance; and since that time he has been gradually recovering his health and strength. The only complaint he has is general feebleness.

Remarks.—We hear a great deal in law courts about "concussion of the spine," as the result of railway accident, and of "anæmia of the cord," said to be indicated by a variety of anomalous and usually subjective symptoms only, as its frequent and often protracted result; but, for some unexplained reason, we hear very little or nothing of such contingencies after other accidents in the course of hospital practice, in cases even in which the spinal cord or some portion of it is unquestionably involved.

It was only the other day a case was partly tried in which a gentleman met with some injury in the course of a railway collision. It was said to be "concussion of the spine," followed by "spinal anæmia." Some of the earlier results of the injury, in the way of symptoms, were so anomalous as to justify a suspicion that they were, at best, simply and purely imaginary; whilst the later ones clearly impugned the notion that they were due to any direct affection of the cord, but in all probability to defective muscular power consequent on prolonged rest in a recumbent posture; and it is to exemplify a case of concussion of the spinal cord, and briefly to compare the symptoms with those which usually follow injuries which are falsely assumed to be of that nature, that the foregoing case has been narrated.

Now concussion can mean nothing if it is not interpreted as an injury in which there is an actual molecular disarrangement and separation—attrition—in the portion of cord concussed—i. e., through the sudden application of force, some molecules have moved with greater velocity than their associated molecules, either to their momentary disseverance from each other—the physical results being imperceptible to the closest scrutiny—or to their disruption, with an objective result in the form of actual solution of continuity. In either case the injury is the same in fact, but different in degree, from mere stretching of the tissues to actual laceration; and inferentially the processes of repair are conformably the same, from a little inflammatory action to inflammation with temporary effusion and, it may be, actual plastic and permanent exudation and deposit.

The relative gravity of several such cases would of course be in accord with the part of the cord injured, the extent of the injury, and, in very great measure, to the nature and extent of the processes which the act of repair would require for its completion.

If we take a spinal column and its contents, and observe the especial manner in which the precious axial cord is suspended, packed, and padded within it, and by means of its several enveloping structures, it would, I imagine, be a matter of surprise to be told that a shake of the whole body would have the effect of shaking the cord, as though it were isolated from its surroundings and free to move independently of them. It would, I think, be more credible if we were told that any such shake or concussion of the cord would be impossible without some such twisting or bending of the vertebral column—it may be short of fracture or dislocation—as would be capable of inflicting direct injury of some sort upon its contents.

This appears to me to be the only feasible way of accounting for those injuries to the cord by concussion which are followed by true cordal nerve symptoms; and the same line of reasoning would lead us to reject spinal concussion as the result of less violent injuries, especially when followed by symptoms which are equivocal or fail in expressing actual cord lesion.

Now, if I have represented the true nature of concussion, it is obvious that, where the cord is concerned, the slightest act must be attended and followed by some sensible alteration or modification of its functions. Some marked change or enervation must inevitably take place, and to such a degree as to admit of clear appreciation.

If no such result attends a blow on the spine it might be confidently assumed that the cord and its envelopes have suffered no injury; and this inference will be strengthened if after a few days, or at the utmost a very few weeks, no symptoms arise which point simultaneously to its nature and seat.

Subsequent statements, such as "numbness" and "loss of power," with "pains in the back," and other entirely subjective symptoms, ought to be regarded with grave suspicion, as either being the hallucinations of a weak-minded and it may be, too, a feeble-bodied person, or as meant for purposes of imposture.

The case to which reference has been made was one in which, for months after the reputed injury, the signs of cordal mischief were, I submit, equivocal; and when they were said to have become pronounced, they were inconsistent with either the facts of anatomy or the laws of physiology, as we shall see hereafter. According to the patient's statement, the earlier consequences of the concussion were unconsciousness for two or three days, with either suppression or retention of urine, for several days at a time, during several weeks; and yet no catheter was used, although the gentleman was under the constant supervision of a most competent medical adviser. Up to the last, after the lapse of nine or ten months, when an examination was arranged, we were told, on seeing the patient, that he had not passed water for twenty-four, or it may be thirty-six, hours. The reason was obvious; the bladder was distended, and on mentioning the catheter, he at once passed a quantity equivalent to the normal quantity of urine for the period named. Amongst the other earlier symptoms were pain in the back and abdomen, for which he had medicine and embrocation. Gin-and-water, it appears, too, was ordered for some "cuts and scratches" on the head, accompanied with headache; and some fugitive sensations, as of "pins and needles," in his feet, were lost sight of in the course of a short time. More valid complaints of defective motion or sensation in the lower limbs were made at a later period in the clinical history of the case—about three months—although the injury was said from the first to have involved the lumbar section of the cord, indicated, as it was assumed to be, in part, by the patient's intolerance of very slight pressure on the vertebral spines in this region.

As time went on, after a few months of reclining on his couch, the lower limbs were said to have become absolutely paraplegic, and to such a pitch as to be entirely devoid of either sensation or the conditions essential to voluntary motion. At the end of about ten months from the date of the accident a circular line about midway down the thigh was said to define the exact limits of sensation; whilst an act of volition did not seem to extend to any but some one of the flexors of the thigh. The range of sensation was so precisely defined that the patient alleged he could feel a pinch of the skin or pulling a hair everywhere immediately above the circular line, whilst the limb was everywhere insensible to stimuli immediately below. Electro-magnetism, however, threw some interesting light on this part of the case, for a moderate coil induced both sensation (as manifested by expressions of pain) and, of course, abundant muscular action.

The symptoms referable to the alleged nerve-injury were in this case said to have attained their utmost severity when the examination which brought out these facts was made—i.e., they had been gradually increasing; and in order to their pathological explanation, recourse was had to a "disease" of modern discovery, I believe—namely, "anæmia of the cord" as the consequence of "concussion." I would ask, *en passant*, has such a condition been demonstrated in any case? I have looked over the Pathological Transactions for the account of such a form of disease, as well as the works of the most distinguished pathologists, but have been unable to find any clear recognition of it. In one case of Mr. Curling's of "concussion of the spine," in the 8th volume, the state of the cord was one of inflammatory degradation of tissue. According to Professor Sayre, of New York, it is a state occasionally associated with some spinal symptoms in cases of adherent prepuce in children, but I do not learn where my friend obtained the key to "anæmia" as being the source of the spinal symptoms. But to return.

Now if we contrast this case with the one—clearly of spinal concussion—above narrated, I think the features will be so striking as to afford strong evidence that they could not possibly be pathologically identical, making every allowance for diversity as to the extent and seat of injury.

The symptoms following actual concussion of the cord are, as I have remarked, due to two causes: first, to the actual injury to its texture; and, secondly, even when the first are very light and transient, to the processes of repair—inflammation, effusion, &c.

In the general systemic disturbance, thirst, elevation of temperature, and delirium, together with grave impairment of the functions of the bladder and intestines, which followed in the case narrated, and the as gradual clearing away of all these symptoms as the cord recovered, those evidences were clearly noticeable which divide the domains of acknowledged pathology in the one case from the merely speculative and, to say the least of it, anomalous pathology in the other.

Axiomatically, whatever the gravity of the symptoms immediately following an injury, it becomes aggravated by the inroad of the processes of repair. Hence the advent of true spinal symptoms at that period subsequent to such an occurrence at which repair commences becomes indisputable evidence of its having taken place, although so slight as to have been unsupported at the time by any appreciable evidence of its existence.

One remark remains, and it is this: In cases of real spinal concussion or other injury, save fracture or dislocation, pain on pressure over the spines of the vertebræ belonging to the injured portion of cord is of very secondary if not questionable proof of lesion; whilst in spurious cases it is held up to the "gentlemen of the jury" as a most clear and indisputable symptom, especially when there is nothing better to offer.

Finsbury-place South, E.C.

EXPERIMENTAL RESEARCHES ON THE PATHOLOGY OF PNEUMONIA.

BY J. DRESCHFELD, M.D., &c.,
LECTURER ON PATHOLOGY AT OWENS COLLEGE, MANCHESTER.

THE fact that rabbits die of acute catarrhal pneumonia after their vagi have been divided has been made use of by Friedländer* to study the histogenesis of that disease. According to him, the process consists entirely in the emigration of serum and white blood-corpuscles from the capillaries of the lung into the alveoli, the epithelium lining

* Untersuchungen über Lungenentzündung, &c. Berlin, 1873.

the alveoli so playing a mere passive part; he, indeed, did find the epithelial cells swell, become more granular, and contain two or more nuclei, but he believes this to be a mere passive change due to their imbibing serum, which leaves them again as soon as the lymphoid elements have filled the alveoli, when the epithelial cells shrink back again to their normal condition, or undergo fatty degeneration. Such a view seemed so opposed to the microscopic changes found in human lungs affected with acute pneumonia, both croupous and catarrhal, that an investigation of the question seemed to me not unimportant; and in the following I beg to give briefly the results of a series of experiments which differ materially in some important points from those obtained by Friedländer.

In a first series of experiments I followed Friedländer's plan. Rabbits were used, their vagi divided, and the animals themselves killed from four to ten hours after the operation. The lungs were inflated, hardened in chromic acid, and then examined; in some cases specimens were examined in the fresh state. The lungs from animals killed four hours after the operation already showed changes perceptible to the naked eye; the lung did not collapse on being removed from the body; the lower lobes were much redder than normal, and on section a good deal of blood flowed from the surface; whilst the smaller bronchi contained a quantity of frothy mucus.

Microscopically hardened sections showed the blood-vessels surrounding the alveoli widened and tortuous, and the alveoli themselves distended and completely filled with large cells, measuring 0·02 to 0·032 mm., finely granular, with a darker central zone, and nearly all containing more than one nucleus; some contained two nuclei; others three, one larger than the other two; and not a few cells contained four distinct nuclei, arranged in pairs. The nuclei themselves were round, finely granular, and possessed a well-formed, centrally situated, hyaline nucleolus. Besides these large cells the alveoli contained only a few red blood-corpuscles, a few lymphoid cells, and some pigment and granular matter. In some places, where by the process of preparation these large cells had become detached, the alveoli were found empty and devoid of any epithelium; while the cells so displaced formed a mulberry-like conglomeration. Whilst there can be no doubt that these large cells were the altered alveolar epithelium, it is equally conclusive, from their swollen, granular, and multinuclear condition, that they were in a state of active proliferation. To compare this condition with one due to mere imbibition, lungs from patients with pulmonary œdema and rabbits' lungs injected with water immediately after death, were examined. But here the appearances were found to be very different; the alveolar cells were large and swollen, but almost hyaline and the nucleus but faintly visible, and nowhere could cells be seen containing more than one nucleus.

Some few rabbits left to themselves after section of their vagi died from ten to fourteen hours after the operation. Their lungs, macroscopically examined, showed the lower lobes red and swollen, and from a section flowed a quantity of blood mixed with frothy mucus; by far the greater portion of the lung floated in water. Hardened sections showed the alveoli filled partly only with the swollen epithelial cells above described, while the remainder was distended by lymphoid cells, of which a larger and smaller variety could clearly be distinguished; the larger differed in nothing from the ordinary lymphoid cell, while the smaller variety was much less granular, and showed, on the addition of acetic acid, a very transparent nucleus, with a very hyaline nucleolus. The capillaries around the alveoli were again found very tortuous and swollen, and contained an abnormally large quantity of white blood-corpuscles; numerous lymphoid cells were also seen in the interstitial tissue. Two strong rabbits were killed ten hours after the operation, and their lungs presented very much the same features as those from the rabbits which were allowed to die.

In a second series of experiments, I tried to produce inflammation, not by section of the vagi, but by injection of an irritating fluid into the lung. The fluid used was a solution (5 to 20 per cent.) of nitrate of silver, of which a few minims were injected into the lung through the trachea, by means of a subcutaneous injecting syringe. The method was found successful, and presented many advantages over the first method; for other animals also, such as dogs and guinea-pigs, could now be used, and the amount of inflammation produced could be regulated by the strength of the solution; the operation, moreover, being but slight, the general effects also could be better watched.

Soon after injection the respirations and the pulse increased, while the temperature remained stationary or showed but a slight rise;* the animal became listless and refused food, and when left to itself and a stronger solution used, died from ten to twenty hours after the operation; two stronger rabbits and a dog, however, recovered. The microscopic changes corresponded exactly to those obtained in the first series, and the results may therefore be briefly summed up. A few hours after the injection the alveoli of the parts of the lung affected were found gorged with large epithelial cells in an active state of proliferation. In guinea-pigs, which almost all died a few hours after the operation, and in rabbits where a dilute solution had been injected, this was the only change observed; in those rabbits which were allowed to die and in those where a strong solution had been injected and where the animals were killed eight to ten hours after the injection, other changes were observed. The alveoli contained a quantity of large and small cells. The larger cells were recognised as the swollen and proliferating epithelial cells, some of which were showing signs of fatty degeneration; the smaller cells consisted of lymphoid cells and smaller cells with a single round nucleus and very hyaline nucleolus. The capillaries surrounding the alveoli contained large quantities of lymphoid cells, while a few such cells were also seen in the interstitial tissue.

The conclusions, then, which may be drawn from these researches are these:—

1. That both by section of the vagi and by the injection into the lung of nitrate of silver an irritative inflammation is produced in animals comparable to the acute catarrhal pneumonia in man.

2. That the first stage in this process consists in an active proliferation of the epithelial cells lining the alveoli, which become detached from the walls of the alveoli, increase in size, become more granular, and show multiplication of their nuclei, and thus give rise to new cells. The small cells with the hyaline nucleolus above described are probably the young cells so formed.

3. That the capillaries in the neighbourhood of the alveoli undergo an active hyperæmia; the white blood-corpuscles accumulate in them, and eventually (when the alveolar epithelium is detached) emigrate into the alveoli.

4. That the epithelium, after the process of proliferation is completed, undergoes fatty degeneration.

It will thus be seen that the view I have taken differs from Friedländer's in ascribing to the epithelium a very active part in the pathogenesis of this process. That these results accord much more with the histological features observed in catarrhal pneumonia in man nobody will deny. I have repeatedly examined lungs affected with acute catarrhal pneumonia both in children and in grown-up persons, and lungs where lobular pneumonia was found near caseous products, and found the closest resemblance between the large multinuclear cells seen there and the proliferating epithelium above described.

Apart from these actual observations there are some other considerations which support the views expressed above. Thus, the lung epithelium certainly resembles the endothelium lining serous cavities; and Buhl,† in fact, looks upon the two as identical, a view which derives some aid from the researches of Sikorsky;‡ and Ranvier§ has proved that, in the inflammation of the peritoneum, the first stage consists in an active proliferation of the endothelial cells lining that membrane, and the correctness of his statements can be easily verified. That, therefore, a similar condition of things should obtain for the lung epithelium is not at all surprising.

The diapedesis of the white blood-corpuscles observed in the subsequent stage in the artificial pneumonia produced in the experiments above detailed, is evidently an equally important factor in the process. Besides being quite in accord with the recent views on inflammation generally,

* In guinea-pigs, which survived the operation but a few hours, there was a steady fall of the temperature.
† Lungenentzündung, Tuberculose, and Schwindsucht, 1873.
‡ Centralblatt, 1870, No. 52.
§ Cornil and Ranvier, vol. i., p. 74.

Slavjansky* has experimentally demonstrated such an emigration into the alveoli of the lung in rabbits and guinea-pigs.

Manchester.

AN INTERESTING CASE IN DENTAL SURGERY.

BY ADAMS PARKER, L.D.S. R.C.S.,

LATE SURGEON-DENTIST TO THE QUEEN'S HOSPITAL, AND CONSULTING DENTIST TO THE BIRMINGHAM DENTAL HOSPITAL.

A LADY consulted me in November last under the following circumstances. She complained that for the last five or six months she had suffered continual pain night and day in the left side of the face, and more particularly on the top of the head. There was no toothache, nor could she identify the pain in connexion with any tooth. Furthermore, a very careful examination of all the teeth on the affected side failed to detect the slightest trace of caries. On the same side the first bicuspid tooth was absent, the second bicuspid was turned half round, so that the outer cusp was presented to the first molar and the inner cusp to the canine, and immediately over this tooth was to all appearances a very small piece of necrosed bone, quite firm, and the most minute investigation failed to detect anything in the nature of a tooth or stump. There had been no blow, no recollection of any fall, or injury of any character, that would account for it.

Upon my suggesting that it was a case that should come under the more immediate care of a surgeon than that of a dentist, she informed me that she believed there was the stump of a tooth there, for some twelve years previously a tooth grew out from the gum horizontally, and directly over the second bicuspid. This decayed very early, and broke off, leaving no after ill-effects.

Such a communication as this led, of course, to a further search for the missing fangs, without any corresponding success, when I determined upon an operation, the result of which proved satisfactory.

I made an incision over the second bicuspid, laying bare the alveolar process, and, placing my thumb against the lingual surface to prevent loosening the tooth, firmly pressed a straight elevator into the cavity by the side of the small portion of necrosed bone, when, without the slightest further movement of the instrument, two small fangs, joined together, evidently those of the first bicuspid, slipped into the mouth. The diagnosis of the case was now complete; the opening caused by this almost painless operation was plugged with cotton-wool saturated with styptic colloid, and the patient sent home, and ordered to remove the wool and frequently rinse the mouth with warm water.

Remarks.—This case calls for one or two remarks, the most important of which is the necessity for making very careful and even long examinations of all teeth when pain in the neighbourhood is supposed to have its origin in one or more of them, before resorting to any extreme measures. In this case a very searching one had been instituted, and nothing could be found to indicate the cause of so much suffering. If the patient had failed to mention the fact of the early-decayed tooth (her age at the time of its decay being only fourteen), I do not see any justification for an operation on the part of the dentist; but having done so, and the partial knowledge of the patient that a stump was somewhere about, no doubt could exist as to the propriety of one, for in the absence of something being done at this period of the case, in all probability at some future time an operation of a more formidable character would have had to be performed to arrest disease that must have inevitably communicated itself to the surrounding parts. Another curious phase in the history of this case was the almost total absence of pain for nearly twelve years after the breaking off of the tooth, and the continuous agony for nearly six months previous to my attending her.

Dec. 5th.—I have this day heard from the patient's medical adviser, Dr. Sharpe, of Walsall, that she has made a complete recovery.

Old-square, Birmingham.

DESCRIPTION OF

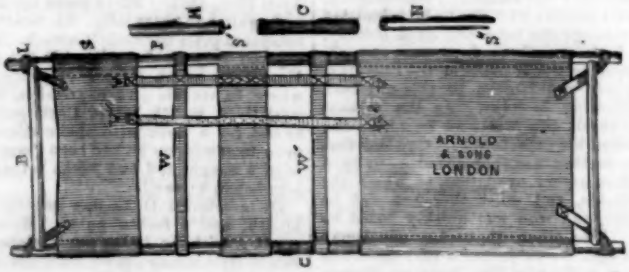
A FORM OF STRETCHER.

BY CHARLES R. B. REETLEY,

ASSIST. DEMONSTRATOR OF ANATOMY AT ST. BARTHOLOMEW'S HOSPITAL.

IN many cases of typhoid and other fevers, of peritonitis, and other inflammations, of bedsore, of various chronic diseases, in many surgical and in obstetric cases, it is very desirable to have a mode of moving a patient from room to room or from bed to bed, and a mode of changing the patient's bed and body-linen without causing the least avoidable disturbance or excitement. For such cases this apparatus has been contrived.

The chief principles on which it is constructed are: 1. It can be placed under the patient piecemeal, and afterwards easily and without danger of mistake fitted together again. 2. It is only a skeleton of webbing in the part which sustains the back and buttocks, and thus allows bedsores and blisters to be easily dressed. 3. The cutaneous sensibility of the back is so extremely blunt that the network of webbing, coarse as it is, feels like a whole and undivided piece.



Its chief advantages are: 1. The most sensitive or feeble patient can be freely moved with no sense of discomfort and no dangerous disturbance. 2. Bedsores and blisters on the back can be easily dressed through its means, and even the back percussed or auscultated through it. 3. Its details can be easily modified by any needle-woman to suit the necessities of particular cases without altering the apparatus in principle. 4. It is light and portable, it packs into a parcel three feet long and five inches in diameter.

In using it the pieces s, s', s", w, and w', are passed under the patient gently, one by one; and the poles then slipped through the hems and loops. Two chairs, each having one of the cross pieces, D, upon it, can sustain the patient while the bed is made, &c.

The stretcher has been used with satisfaction at the Queen's Hospital, Birmingham, and at St. Bartholomew's Hospital, London. It is made by Messrs. Arnolds, West Smithfield, London, E.C.

* Virchow's Archiv, xlviii., p. 326.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

CASES UNDER THE CARE OF MR. MAUNDER.

THE following cases were submitted to operation on the 1st December, 1875; and are reported by Mr. J. Job, house-surgeon.

CASE 1. *Stricture of Urethra; "immediate treatment."*—This case was that of a man twenty-seven years of age, who suffered from stricture which had caused retention for the third time during the last two years, and which led him to the hospital on Nov. 8th. Catheterism having failed, Mr. Job administered croton oil and a warm bath, with the desired effect. After a few days' rest in bed, Mr. Maunder succeeded in passing a fine catgut bougie. This was retained for three days without the least discomfort, and soon No. 6 catheter could be introduced. At this stage an unsuccessful attempt was made to pass an instrument, and a very severe rigor, attended by a temperature of 105°, followed. To remove irritability and prevent a repetition of rigor, treatment by "immediate dilatation" was determined upon. A No. 3 catheter and then the dilator were insinuated, after some little difficulty, through the stricture; and this latter was split so as to admit of the bladder being emptied by a No. 10 catheter—the largest the meatus would admit.

Mr. Maunder remarked that in a very large majority of cases of stricture, gradual dilatation by the catheter and bougie sufficed for the patient's relief, and it was only in comparatively rare instances that more decided operative interference was requisite—a circumstance which must be very evident, as, notwithstanding the large number of patients so suffering admitted into the hospital, few required more. After discussing the merits of the case, and the *modus operandi* of Holt's dilator, he desired to draw especial attention to the great value which he set on this method of treatment, and expressed his surprise that some surgeons were dissatisfied with the result of the operation. He had had a fair experience of it in both hospital and private practice, the latter very much among a class of gentlemen, who were not always the best subjects for any operation, and yet among such his experience was eminently encouraging. His custom was to advise a patient who was to be submitted to this operation to arrange to take ten days holiday, though in very many instances three days were enough. Under these circumstances he would perform the operation on a Friday, and his patient would often be able to return to business on the following Monday. At the present moment he could only recall two instances in which the operation had not answered his expectations. One was that of a young man whose urethra was encroached upon by a great deal of hard, inflammatory exudation, to which the operation was inapplicable, and must therefore not be charged with the failure, and who was quickly cured by external urethrotomy. The other, that of a gentleman about fifty-two years of age, the subject of a very tight and irritable stricture, and a patient of Dr. Dove, of Pinner. The stricture was split to the full extent, but it soon relapsed, and never after could be dilated beyond No. 8.

The patient has had no more rigors, has progressed uninterruptedly well, and is highly satisfied with the result of the operation.

CASE 2. *Cleft Palate (congenital) in a boy aged four.*—The gap in the hard palate extended nearly to the anterior palatine foramen, was moderately wide, and Mr. Maunder expected to have no difficulty in closing the whole by two operations, taking the soft palate first. He said he preferred this method of proceeding, so that the child might not lose much blood at one time, as might otherwise be the case, and might possibly prevent ready union. The vivified edges of the soft palate were brought together after section of the levator palati muscles from behind. The anterior pillars of the fauces were also snipped across. The operation would be completed at a future time. Here, as in all operations on mucous membrane in which swelling quickly arises, the caution was given against drawing the stitches tight.

Dec. 11th.—The edges of the soft palate had united.

CASE 3. *Indolent Ulcer.*—A delicate-looking, ill-developed woman, twenty-nine years of age, was the subject of an indolent ulcer just behind and above the outer ankle. The sore was surrounded by unyielding scar tissue, and had resisted treatment both prolonged and varied.

After explaining the process of healing by granulation, and the principle of the operation suggested by Mr. Gay, Mr. Maunder made an incision through the integument about three inches in length, and parallel with the long axis of the sore.

Dec. 11th.—Already granulations are arising, and the sore is even narrower than it was. The new wound is healthy.

CASE 4. *Talipes Equino-varus.*—A child, two years old, was the subject of this congenital deformity. Mr. Maunder explained that he should divide then only the anterior and posterior tibial tendons, leaving the tendo Achillis uncut for the present, in order that the process of abduction and rotation of the foot may be facilitated while the heel is firmly fixed by its tendon. He pointed out that, as a general principle in tenotomy, the knife is to be introduced between the tendon to be cut and any important organs, such as vessels and nerves, adjacent; the edge of the knife is thus directed away from them.

BRISTOL GENERAL HOSPITAL.

CASE OF PARACENTESIS PERICARDII; RECOVERY.

(Under the care of Dr. BURDER.)

THE fact that the operation of tapping the pericardium for the removal of effused fluids is still *sub lite* renders the record of every case in which this operation has been performed peculiarly valuable and interesting, whatever the ultimate issue. In the subjoined case the benefit derived from the treatment was marked, and it is scarcely too much to say that the patient's life was actually saved by drawing off the serous fluid, which was found to measure forty-two ounces.

For the notes of the following interesting case we are indebted to Mr. Thomas Elliott, M.B., late house-surgeon.

John M——, aged sixty, a carpenter, was admitted on April 26th, 1875. Forty years ago he had rheumatic fever, and again two years later. His heart, he stated, was affected two years prior to the first attack. After these illnesses he enjoyed very good health till the close of the year 1874. He served as an "army carpenter" out in the Crimea, where, to use his own expression, he had "a lot of rough work." A month before Christmas, 1874, he was confined to bed for a week with rheumatism. For the two months prior to admission he had been "complaining," and troubled with a cough, and two weeks before admission his feet and legs began to swell.

On admission there was general anasarca, shortness of breath, and a feeble pulse. Heart-action rapid and irregular, with an indistinct systolic mitral bruit. Lungs anteriorly resonant, posteriorly resonant at right base, dull at left base; respiration exaggerated over right side, tubular at left base.

On April 28th the patient was much worse, apparently moribund. Breathing very oppressive, and could only be carried on when the man was lying on the left side, and slightly on his face. The face was of a livid colour; veins in neck full and tortuous, but not pulsating. Heart's apex could not be seen or felt; area of dulness greatly increased, but difficult to define on account of external œdema. The sounds were very distant and indistinct, almost inaudible. Lungs resonant anteriorly and at right base, dull at left base; respiration exaggerated over right side, tubular at left base; no appreciable difference between the two sides in conduction of voice sounds.

From these symptoms and signs Dr. Burder concluded that the patient's great and immediate distress was due to dropsy of the pericardium, and that therefore paracentesis should at once be done. The operation was performed by the house-surgeon (Mr. Thomas Elliott) by means of Dieulafoy's pneumatic aspirator, the needle being inserted between the fifth and sixth ribs, and an inch to the right of the nipple. Forty-two ounces of clear, pale, straw-coloured fluid were drawn off. Towards the close of the operation the apex of the heart was felt to strike once or twice against the needle, but it ceased on placing the needle more horizontally. It is here worth stating, especially from a practical point, that for cases of paracentesis the needles of the aspirator might with advantage be graduated. At times it is extremely difficult to estimate how far the needle has penetrated, as it was in this case, where there was a considerable amount of external œdema.

The patient expressed himself as easier after the operation, but it was not till some hours after that there was any marked improvement.

On April 29th the patient looked much better; the face was of a better hue, breathing much easier, and he could lie on either side or on his back. Respiration 50 per minute; pulse feeble. Dulness over base of left lung diminished, and not extending so high upwards. Respiration over same region much more audible, with some moist sounds. Area of heart's dulness definable, sounds not so audible as immediately after tapping. On April 30th the improvement was greater, the pulse was much stronger, and the general anasarca had gone down a good deal. On May 2nd he said that he had slept but little the last two nights, on account of continued coughing, but the next night he slept much better. On May 3rd he could lie on either side, but said that if he did so he must be well over on his face, but he preferred lying on the left side. Heart-sounds indistinct; lower extremities more œdematous.

From this time he continued to improve, and on May 31st the dropsy had entirely disappeared and the heart's apex could be seen and felt beating about an inch below the left nipple. The area of dulness was definable and greatly diminished; the sounds were louder, and an indistinct bruit, apparently louder towards the base, but not carried up along the large bloodvessels, could be heard. There was still a line of dulness posteriorly at right base, where also the respiration was feeble. After this he sat up daily, but if he made any exertion he suffered at once from dyspnœa and palpitation. The heart's beat was less distinct and was more to the outer side of left nipple than before; sounds irregular and confused.

On July 6th he was discharged as an out-patient, much improved and able to move about more freely.

STANLEY HOSPITAL, LIVERPOOL.

OLD OMENTAL HERNIA; STRANGULATION OF COLON; SAC ACQUIRED.

(Under the care of Mr. J. KELLETT SMITH.)

THE following notes should be read in conjunction with those that appeared of a similar case at this hospital on the 18th of December last.

A distiller, aged fifty-three, was admitted on August 31st, 1875, suffering from an old inguinal hernia of the left side, which had been irreducible for four days previously. The tumour was very large, and he complained of pain in the lower part of the abdomen, which was moderately distended. He vomited also. All efforts at reduction by taxis having failed, the operation of herniotomy was performed on September 1st, under a spray of carbolic acid lotion, which was used throughout. As the neck of the sac was not discoverable from the outside, much less the constricting tissue, an opening was made, and a very narrow neck found low down in the scrotum. Much fluid escaped, and about a pound and a half of omentum was disclosed, in the folds of which a few inches of large intestine were concealed (presumably the transverse colon). This was only slightly reddened, and was easily reduced. The omentum was absolutely uninjured, and was eventually reduced after much difficulty. The sac was next stripped up from the scrotum, and put back into the abdomen after the omentum, several catgut ligatures being applied to arrest the hæmorrhage caused by this procedure. Sutures of carbolised waxed silk were used, and a drainage-tube of caoutchouc placed in the upper and lower extremities of the wound respectively. The dressing consisted of many-folded carbolised gauze, which was persistently used, and changed under the spray. Suppuration, however, was not prevented in the scrotal portion of the wound. Nothing else of note occurred during the convalescence, except an attack of bronchitis, to which he is liable, and which probably delayed the healing of the wound. He was discharged quite well, as far as concerned the hernia, but slightly bronchitic, seven and a half weeks after operation.

Remarks.—This case, and the very similar one reported in THE LANCET of Dec. 18th, were both surrounded with most favourable circumstances before and during operation, and were probably not exposed to any real risk during the after-treatment. Before operation, the fact that each strangulation occurred in an old sac, and the shortness of the period during which this symptom was unrelieved, were points which mitigated as far as possible the gravity of the cases. During operation, the discovery of uninjured parts, and the maintenance of antiseptic conditions during their exposure, no doubt contributed much to avert any accidental intra-peritoneal complications. The omentum might easily have been tied and cut off, which would certainly have been done had it not been that these masses were maintained antiseptic throughout. Moreover, it was not expected that their return into the abdomen would result in any harm. The stripping up and reduction of the scrotal portion of the sac, in one instance, was done in the hope that as near an approach as practicable to a radical cure might be made by the blocking of the internal ring. This was only imperfectly achieved in the other (congenital) case, on account of the inseparable attachment of the sac to the testicle. The stitching together of the neck of the sac was only regarded as a temporary measure, as experience has already shown that permanent occlusion of the neck of the sac by suture is seldom attained.

HÔPITAL ST. LOUIS, PARIS.

SMALL SARCOMA OF THE ORBIT; EXOPHTHALMIA; ENUCLEATION OF THE EYEBALL; ERYSIPELAS; DEATH; AUTOPSY.

(Under the care of M. PÉAN.)

J. B——, aged twenty-seven, was admitted Sept. 8th, 1875. He was a well-nourished and healthy-looking man. His family history was good, and he denied ever having had syphilis. In the month of May, 1871, while a soldier, he had acute double conjunctivitis. This attack was soon cured by appropriate treatment. Three or four months later on his friends noticed that his right eye protruded rather more than his left one. This protrusion, however, caused him no inconvenience, and his sight remained equally good in both eyes. At about this time he attended at the Val de Grâce Hospital, where he was put under treatment by Dr. Perrin, consisting of iodide of potassium and mercurial frictions. His condition was not ameliorated after this treatment, and from that moment his eye became more and more prominent.

On admission the eyelids were red and inflamed, but there was no œdema. On the right side the eyelids were still capable of closing over the globe. The patient had command over the extrinsic muscles of the eyeball, which acted well. The conjunctiva was highly injected, and there was slight œdema at the internal angle; cornea healthy; size of pupil normal; the iris contracted well under the influence of light. The patient could count fingers at six inches, and he could read No. 12 Jäger. The pharynx and the nasal fossæ presented nothing abnormal. The general health was good.

Sept. 12th.—Being unable to obtain satisfactory knowledge as to the nature and the cause of the mischief, M. Péan made a curved incision, parallel to the border of the eyelid. On introducing the finger into the incision, a tumour of small dimensions, and rather hard, was felt rest-

ing upon the floor of the orbit, in the vicinity of the sphenoidal fissure. No liquid of any kind could be drawn from it.

A hard tumour, probably of a fibrous or fibro-plastic nature, of the floor of the orbit was diagnosed.

It was decided to extirpate the tumour and to enucleate the eyeball at the same time. Accordingly the former incision was prolonged, and the whole eye, with the tumour, was taken out, the periosteum alone being respected. In the course of the operation M. Péan made use of his "hæmostatic pincers," which rendered valuable service, drawing down the eyelid by their weight, and compressing the cut arteries at the same time. The two eyelids were brought together and fixed by means of a metallic suture, after the orbit had been filled with sponges.

During the operation it was noticed that the tumour was quite independent of the eyeball and of the optic nerve. It appeared to adhere intimately to the two borders of the sphenoidal fissure, and seemed to penetrate into the cranial cavity. It was surrounded by adipose tissue. Upon microscopical examination it was shown to be a simple fasciculated sarcoma.

Sept. 13th.—General condition satisfactory. No rigors. Temperature in rectum 100° F.

14th.—Well-marked blush all around base of orbit. Headache. Shivering fit which lasted five minutes. Pulse 90; temp. 100·8°.

15th.—Well-marked erysipelas. Ordered a purgative, and a liniment composed of equal parts of turpentine and ether to be rubbed on the face.

16th.—Erysipelas shows no tendency to spread; œdema of the eyelids of the left eye. Pulse 100; temperature 102·2°.

17th.—Fluctuation in right temporal region. Pus allowed to flow out. Loss of appetite. Sub-delirium at night. Pulse 90; temperature 102·2°.

21st.—One of the sutures taken out to allow a freer exit to the pus. Pulse 100; temperature 103°.

23rd.—Very agitated. Cries out and writhes in his bed. Discharge very considerable from the orbit. Pulse 104; temperature 103°.

25th.—Delirium during night; noisy breathing, rigors, and floccitation. During the night the patient was attacked with hemiplegia of the whole of the left side. Pulse 108; temperature 104°.

26th.—Died at 6 o'clock in the evening.

Autopsy, thirty-eight hours after death.—A purulent collection was found in the temporal fossa communicating with the cavity of the orbit, and the periosteum was lifted up at the antero-external angle. The roof presented a black tinge, and every here and there small abscesses were formed, of about the size of a pin's head. On the brain being taken out, a layer of pus of about one inch in thickness was found under the dura mater. The whole sphenoidal lobe was found to be soft and fluctuating. In the interior of this lobe there was a small abscess which communicated with the exterior pus. In the frontal lobe there was another large abscess occupying the white substance of the three frontal lobes, and reaching back as far as the anterior extremity of the corpus striatum. The remainder of the brain was healthy, as were also all the organs of the chest and abdomen. The outer wall of the orbit was found to be excessively thickened, owing to a periostosis of the three bones which form this wall. The optic nerve was very slightly injured. This periostosis of the outer wall explained the considerable projection of the eye, which was not entirely due to the sarcoma.

Remarks.—M. Péan, in telling his audience how hard it was sometimes to come to a true appreciation of the determining cause in cases of exophthalmia, pointed out that in this particular case the slow march of the disease, the absence of all pain and of any inflammatory process, the general health of the patient, and the fact of the pharynx and the nasal fossæ being healthy, had permitted him to lay aside all other suppositions, and to diagnose the presence of a retro-ocular tumour. He considers that in these cases it is almost always better to enucleate the eyeball at the same time as the tumour, as the position which these generally occupy renders surgical manœuvres extremely difficult, and exposes the patient to greater risk of the recurrence of the mischief, as part of the tumour may be left behind.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

THE annual general meeting of this Society was held on the 4th inst., the President, Mr. George Pollock, in the chair. The proceedings commenced by the reading of the report of the Council by one of the secretaries, an outline of which, together with the list of the newly-elected officers and members of the Council, will be found on another page. Then followed the reading of the summary furnished by Mr. Hutchinson of the points he intended to raise in the forthcoming discussion on syphilis. This also we print elsewhere. Among the interesting features of the evening was a brisk little debate upon the existence, in fact, of movable kidney, which was raised in a question from the chair as to whether this had ever been recognised post mortem. The question thus started on a side issue—the subject introducing it being a specimen of congenital displacement of the kidney shown by Dr. Legg—led eventually to the adoption of a resolution for the appointment of a sub-committee to investigate the whole subject. Dr. Fletcher Beach showed specimens from a case of sporadic cretinism, which elicited some valuable remarks from Dr. Fagge as to the relations of this curious affection with true or hereditary cretinism.

During the evening the following gentlemen were elected members of the Society:—R. S. Fancourt Barnes, M.B., Alex. Hughes Bennett, M.D., Thomas Bond, M.B., F.R.C.S., James C. Ewart, M.B., John Gill, M.D., Bernard Pitts, M.A., M.B., and William E. R. Wood, M.A.

Mr. NUNN showed photographs of the forearm and hand from a case of Impacted Fracture of the Radius, produced by a fall on the ice. It had been treated with a "pistol" splint, but there was left fully half an inch of shortening, with enlargement and immobility of the wrist. Mr. Nunn thought that in such cases the extension of the joint was not pursued for a sufficiently long time.—Mr. WOOD asked whether the adducted splint was used.—The PRESIDENT inquired what was the exact seat of the fracture.—Mr. NUNN replied that the case was not under his own care, so that he could not say which form of splint was employed. The fracture was evidently near the lower end of the radius, probably splitting the carpal extremity.

Mr. NUNN also exhibited photographs of hands affected with Rheumatic Gout, showing extreme deformity and distortion of every finger of both hands with the exception of one—namely, that upon which the patient wore her wedding ring. He thought this illustrated what very slight causes could prevent the spread of disease to particular parts—for example, the constriction produced by the ring; and, in further evidence of this, he showed the cast of a hand from the museum of Middlesex Hospital in which the only finger that had escaped the distortion was one which was bound to the palm by contraction of its flexor tendon.

Dr. WICKHAM LEGG showed a specimen of Aneurism of the Mitral Valve, taken from a male subject who died from pulmonary catarrh and renal dropsy. There had been during life a systolic murmur at the apex, a double murmur developing towards the end of life. There was slight adhesion of the pericardium and great enlargement of the heart, especially of the left side. On the large flap of the mitral valve were two bulgings of the auricular surface, near to the margin of the cusp, one about the size of a split-pea, the other of a hempseed. These communicated with the cavity of the ventricle by means of two apertures. Dr. Legg remarked upon the rarity of this condition, and believed that it arose from an ulcerative endocarditis of the ventricular side of the valve.

Dr. LEGG then showed an interesting specimen of Aneurism of the Heart, which was met with in the body of a man, aged sixty, who died of phthisis and renal disease. There was thickening of the mitral and aortic valves, and at the base of the left ventricle, between the two segments

of the aortic valves above the large mitral cusp, was a pouch capable of holding about half a small marble. The walls of the pouch were formed of a thin translucent tissue crossed by bands of membrane arranged like the musculi pectinati of the auricle. Dr. Legg stated that this was a case of aneurism of the septum without endocarditis, and he regarded it as caused by an imperfect development of the heart. He referred to the remarkable "pathological foresight" shown by Dr. Thurnam, to whom most of our knowledge of cardiac aneurism is due, but who, though never having met with a specimen of aneurism of the septum, had foretold, from his study of the "undefended space," that when aneurism of the septum did occur, it would be seen at this spot.

Dr. LEGG showed also a specimen of Displaced Kidney taken from the body of a boy. The right kidney lay on the crest of the ilium, with its hilus turned forwards, and its artery arose from the aorta, just below the inferior mesenteric. The suprarenal capsule occupied the normal position. It was not the rule for the right kidney to become displaced. The present was evidently congenital. He had only met with one other similar instance in which the left kidney was displaced, and received its vascular supply from the iliac artery.

In reply to Dr. Barlow, Dr. LEGG said there were no symptoms of angina pectoris in the case of cardiac aneurism.—Dr. COUPLAND, referring to the last case, stated that he had recently received from Mr. Balding a specimen in which the right was united to the lower part of the left kidney, so that the right ureter passed across the spine to enter the bladder. This diplacement, evidently congenital, was more allied to "horseshoe kidney." In this case, the right suprarenal capsule maintained its normal position. Movable kidney was more frequent on the right than the left side, and he referred to a case in point.—Dr. FAGGE pointed out that the specimen shown by Dr. Legg did not come under the category of movable kidney at all.—The PRESIDENT said that he had never met with a movable kidney after death, and he inquired whether any of the members of the Society had met with a case in which diagnosis was verified on post-mortem examination.—Dr. GREENFIELD referred to a case in which a diagnosis of movable kidney had been made seven years previous to death, when this was found to be a subperitoneal fibroid of the uterus.—Dr. TAYLOR had seen a case post mortem in which the kidney was considerably lower than usual, with its inferior end tilted upwards and forwards. In reply to Mr. Pollock, he stated there was no calculus present in this case.—Dr. LEGG had seen kidneys (post mortem) which it was conceivable might have been mobile during life; only the difficulty was, that the organs were never examined until after the removal of the other abdominal viscera.—Dr. CHOLMELEY said that he had seen cases, clinically, in which there was not the slightest doubt as to the diagnosis. He had never seen a case post mortem.—Mr. WAGSTAFFE had never seen a case of movable kidney in the post-mortem room.—Mr. NUNN, after twenty-five years' experience in the dissecting room, could state that he had never seen a kidney provided with a "mesentery" so as to allow of its coming forward amongst the intestines.—Dr. JOHN WILLIAMS pointed out that it was quite possible for a kidney to be movable during life, and yet to be fixed after death; for it must be remembered that in the living subject the fat is fluid. He had seen several cases of movable kidney.—Mr. HAWARD could hardly believe that the post-mortem congelation of the fat would suffice to fix a kidney which had been mobile during life. The kidney could be felt, and he thought no mistake could be made when it was felt. He inquired whether any renal symptoms were ever produced by the handling of these "movable kidneys."—Dr. GREENFIELD said that in a case lately under the care of Dr. Bristowe, on several occasions hæmaturia followed manipulation.—Dr. COUPLAND drew attention to the fact that movable kidney occurred in the largest proportion among women who had borne children.

At a subsequent period it was resolved, on the motion of Dr. Legg, seconded by Dr. Fagge, that "a committee be appointed to inquire into the matter of movable, floating, and displaced kidneys, with a view of obtaining statistics as to their occurrence, &c., to be published in the Transactions of the Society."

Dr. FLETCHER BEACH showed the Trachea and Fatty Tumours from a case of Sporadic Cretinism. The patient, a girl eleven years of age, was the only child so affected out of a family of four children. She had convulsions in infancy ascribed to teething; and she cut no teeth till she was two years old. She did not grow from fifteen months to five years old, then she grew to eight years of age. The father was intemperate, the mother robust and healthy. The child was 32¾ inches in height, and weighed 2 st. 4 lb. The head was large, flattened at the top; the anterior fontanelle not quite closed; sutures not well united; forehead low; countenance vacant; nose flattened; ears large; gums spongy; teeth regular but small. No trace of goitre, but on each side of neck above the clavicle was a well-developed swelling. Trunk and limbs stunted. The child could not speak, stand, or walk. After death there was found incomplete ossification of the bones of calvaria; narrowing of the foramen magnum; basilar process of occipital bone was horizontal in direction; the sella turcica shortened antero-posteriorly. The brain weighed thirty-one ounces, the cerebellum, pons, and medulla contributing four ounces and a half of this weight. The trachea was small, and there was complete absence of the thyroid gland. In each posterior triangle of the neck was a fatty tumour, lobulated but not encapsuled, and extending beneath the sterno-mastoid and clavicle. The case resembled thus in character those described by Dr. Fagge, and also closely corresponded with the conditions found in endemic cretinism. Dr. Beach remarked that sporadic cretinism was not so rare as might be expected; he had now two cases in the Clapton Idiot Asylum, and had seen three or four others. The causation of sporadic cretinism is still somewhat obscure.—Dr. HILTON FAGGE thought the publication of such cases of great value, as it would lead to their recognition abroad. He thought there was a close relation between sporadic cases and those which occur endemically. The existence of fatty tumours in the neck was the most peculiar point of difference, but Dr. Beach has shown in his previous communication that when the child is badly nourished these tumours get absorbed. Hence they might exist in other cases. The absence of the thyroid was remarkable, but not constant. One of the cases he showed at the Society two years ago, presented a goitrous thyroid in addition to the supraclavicular tumour. He still thought it possible that the enlargement of the thyroid in goitre might act as a protecting influence against the development of cretinism.—Dr. BARLOW had now under his care two cases of sporadic cretinism. In one no thyroid body could be felt, but in the other the gland is evidently present.

Dr. GREENFIELD showed a fresh specimen of Congenital Malformation of the Aortic Valves, which consisted in the existence of only two segments. It was from a man, sixty-eight years of age, who died from severe accidental injuries, and was not known to have presented any symptoms of heart disease. The heart weighed sixteen ounces, and was generally hypertrophied. The two segments of the aortic valve were anterior and posterior respectively, and of nearly equal size; the posterior being normal, the anterior being formed by the growing together of the right and left anterior segments, as was indicated by their relations, and also by the origin of the both coronary arteries from the anterior sinus of Valsalva, one on each side. The aorta was dilated, but there was no evidence of any regurgitation having occurred, and the hypertrophy was accounted for by cystic degeneration of the kidneys. The case was of interest as evidence that such malformations did not of necessity lead to any symptoms of heart disease, and also as showing that they really originated in malformation, and not, as he believed had been suggested, in endocarditis occurring during fœtal life.

Dr. SYMES THOMPSON showed a specimen of an Anencephalic Fœtus, which had been sent to him for exhibition. He could not say if it had shown any signs of life.

Mr. WARREN TAY showed for Mr. Hutchinson a fresh specimen of a Tumour of the Thigh. The man was thirty years of age, and three years ago began to suffer from a painful swelling in the lower part of the left thigh. He was treated with antisyphilitic remedies without effect. He was seen by Mr. Hutchinson ten days ago, when there was a large rounded mass in the lower part of the thigh surrounding the bone. Mr. Hutchinson amputated the thigh at the middle third. The growth presented a peculiar appearance; it was semi-translucent, of whitish colour, and invested

the greater part of the lower third of the femur; the periosteum was destroyed, and the bone eroded. The growth also invaded the medullary cavity, but the bone was not expanded over it. It was referred to the Committee on Morbid Growths.

Dr. COUPLAND showed for Mr. Balding a Tumour connected with the Sciatic Nerve, which was removed from a labourer, thirty-four years of age, admitted into the Royston Cottage Hospital in June, 1874. The patient had suffered from pain in the left leg for three years, and had noticed a swelling at the posterior and lower part of the thigh for about twelve months. The tumour was excised together with five inches of the sciatic nerve, which was spread over it. Dr. Coupland had examined the growth, and had found it to be one of mixed nature. He asked for it to be referred to the Morbid Growths Committee.

Dr. COUPLAND showed specimens of Cancer of both Breasts and Ovaries removed from a young woman twenty-four years of age, admitted into the Middlesex Hospital in April, 1875, under the care of Mr. Hulke. She was a robust, healthy-looking brunette. When seen the right breast was the seat of a very hard subglobular mass about 3 in. in diameter. Some years before this breast was the seat of an abscess, which followed her first and only confinement. The nipple was flat, and she had never nursed with the breast. There was no hereditary history of cancer. On the 22nd April Mr. Hulke removed the whole of the diseased structure. In June two small recurrent nodules were removed by Mr. Clark. In November a sudden and rapid evolution of secondary cancer occurred, beginning in the right mammary region, implicating the left breast and the whole of the soft parts of the thoracic parietes. In less than a fortnight from the beginning of this outburst her chest had become quite fixed, and the patient literally died from asphyxia, the infiltrated chest-wall forming a rigid cuirass entirely impeding the movements of respiration. After death, besides the wide-spread infiltration of the thoracic wall, there was cancer of the mediastinal glands, of a small part of the right pleura, and of the visceral layer of the pericardium. The abdominal viscera, peritoneum, and lymphatic glands were free from cancer, but the two ovaries, each enlarged to the size of a chesnut, were wholly converted into soft cancer. The growth presented the characters of medullary cancer. Dr. Coupland drew attention to the following points:—(1) The youth of the patient. Out of 235 cases of mammary cancer in the Middlesex Hospital, from 1867 to 1875, only three were below thirty years of age. (2) The occurrence of the primary growth in a breast which had not been used for lactation, and previously the seat of abscess. (3) The extraordinary rapidity of the final outburst in the chest wall, and the mode of death. And (4) the association of cancer of both ovaries apart from any other abdominal cancer. He quoted a few statistics, compiled from the cancer tables of the Middlesex Hospital Reports, showing the rarity of ovarian cancer secondary to the mammary disease, the liver being the organ most frequently attacked, and he thought the case suggestive as an instance of the contemporaneous evolution of cancer in organs physiologically allied.—Mr. WARREN TAY mentioned the case of a woman, aged twenty, who was under care at the London Hospital, ten years ago, for acute symmetrical cancer of both breasts and both ovaries, the whole illness dating two months. There were also growths in the heart and both kidneys, the liver, front of sternum, and lymphatic glands.

The meeting then adjourned.

MEDICAL SOCIETY OF LONDON.

THE meeting of the 20th ult., Dr. Routh, President, in the chair, was characterised by a very able and exhaustive paper by Dr. LAUDER BRUNTON on the Physiological Action of Alcohol, the discussion on which was of such an animated nature, and was deemed of so much importance that, by the unanimous vote of the Society, it was adjourned for continuation at the next ordinary meeting. The proceedings opened by Mr. NAPIER commenting on the remarks of the President at a previous meeting, concerning the Pessary brought forward by Dr. Robert Lee, and invented by the speaker. He expressed himself as gratified to find that the one said by Dr. Routh to have been in existence for some years presented several points of difference, such as having a rigid stem, and being made of ordinary black rubber instead of vulcanite.—The PRESIDENT said he had merely wished to point out that india-rubber had been used before for the construction of pessaries.

The following is a brief *résumé* of Dr L. BRUNTON'S paper:—Alcohol, he said, in small doses increases the secretion of gastric juice, and the movements of the stomach, thus aiding digestion. Although unnecessary in health, it is useful in exhaustion and debility; it increases the force and frequency of the pulse by acting reflexly through the nerves of the stomach. In large doses it impairs digestion by precipitating pepsin and over-irritating the stomach, and may produce death reflexly by shock. After absorption in the blood, it lessens the oxidising power of the red blood-corpuscles, this property rendering it useful in reducing temperature. When constantly or very frequently present in the blood it causes accumulation of fat or fatty degeneration of organs; it undergoes combustion in the body, maintains or increases the body weight, and prolongs life on an insufficient diet, being therefore entitled to be reckoned as a food; if large doses be taken, part of it is excreted unchanged. It dilates the bloodvessels, increases the force and frequency of the heart's action imparts a feeling of comfort, and facilitates bodily or mental labour, not by giving additional strength, but by enabling a man to draw upon his reserve energy, thus giving assistance in a single effort, but not in prolonged exertions. The same is the case with the heart; but in disease alcohol frequently slows instead of quickening this organ, and by so doing economises instead of expending its reserve energy. By dilating the vessels of the skin alcohol warms the surface at the expense of the internal organs; therefore it is injurious when taken during exposure to cold, but beneficial when taken after the exposure is over, as it tends to prevent congestion of internal organs. The symptoms of intoxication are due to paralysis of the nervous system, the cerebrum and cerebellum being first affected, then the cord, and, lastly, the medulla oblongata. The apparent immunity which drunken men enjoy from the usual effects of serious accidents is due to paralysis of the nervous mechanism through which shock would be produced in the sober condition.—Dr. BROADBENT, in opening the discussion, said the paper was one he himself esteemed very highly, as giving a scientific explanation of experience, and thought it almost impossible to question the sound reasoning contained therein. He considered the actual combustion of alcohol to be much easier in disease than in health, as was mentioned by the late Dr. Anstie, and was of opinion that the effect produced by it on the nervous system was too apt to be referred entirely to the cerebral mass. The action of alcohol seemed to him similar to that of chloroform, ether, and nitrous oxide, interfering with nervous oxidation from above downwards, independently of the brain. He agreed with Dr. Brunton as to alcohol serving as a food.—Dr. DRYSDALE could not consider alcohol as a food; he considered a food should contain albumen, starch, &c. He regarded milk as a perfect food, and it did not contain alcohol. He thought when alcohol was taken into the body a portion is given out by the breath and sweat, a large proportion being aldehyde and acetic acid, whilst a considerable part escapes in the urine as carbonates. He did not see so much indication for alcohol in disease. No one, he said, should take small quantities every day, as it is apt to generate disease, such as gout, &c. He dwelt on the conclusions arrived at by the medical section in Brussels, that the number of cases of chronic and acute diseases indicating the administration of alcohol was much smaller than was generally thought, and that in many cases it could well be replaced by some drug of materia medica, but was indispensable in cases of old alcoholic abuse, and concluded by saying that in London the habit of giving alcohol medicinally was too extensive.—Dr. SANSOM could not believe it thoroughly settled that alcohol was a dilating agent of the arterioles. He agreed to the vascular dilatation of the vessels of the stomach, but this he considered mere irritating influence. Reddening of surface and increased heat would certainly seem to indicate dilatation of the vessels, but we cannot be sure of this, he remarked, and the flush is generally local. No agent, he continued, produces such contraction of the arteries as

alcohol, as demonstrated in the web of the frog's foot by the speaker's own experiments, chloroform having the same effect, but taking longer. The increase of the heart's action was undoubted, therefore the flow was augmented; but in smaller canals the arterial tension was increased. The action on the blood, he continued, was to diminish the motor power of the white corpuscles, as observed by Dr. JOHN HARLEY.—Mr. BARTLETT, in support of the theory of alcohol acting as a food, drew attention to the fact that very few vegetable matters do not contain alcohol, and that it is also produced by the decomposition of animal bodies; therefore, he thought it was a question of degree only in its administration, and considered there should be no such thing as total abstinence, but laid some stress on the kind of alcohol to be employed.—Dr. SYMES THOMPSON was of opinion that preliminary to hard work, and during the work, it was injurious, but he lauded its use after a hard day's labour, thus condemning it in normal conditions as a dietetic, but praising it in abnormal conditions, in some exhaustive diseases, and in congestion of the internal organs, as it relieves them.—Dr. EDMUNDS thought alcohol in some cases to be a disadvantage, as it took caloric from the internal organs.—Dr. JOHN BRUNTON said he had long been persuaded that alcohol acted as a food, and spoke of its marvellous good effects in cases of post-partum hæmorrhage.

The discussion was then adjourned to the next ordinary meeting.

Reviews and Notices of Books.

Quain's Elements of Anatomy. Eighth Edition. Edited by SHARPEY, THOMSON, and SCHAFER. Vol. I. London: Longmans, Green and Co.

THE vicissitudes to which a valuable text-book, that keeps in the van of advancing knowledge, is liable, is well illustrated by the history of this work. The first four editions were written by the late Dr. Jones Quain, the fifth by Professors Richard Quain and Sharpey, and in the next two the name of Quain merely served as a distinctive title, and was only to be found at the head of the section on Surgical Anatomy. In the new edition the chapters on this subject have been incorporated with the body of the work, so that the reason for its title must now be sought in the preface. The volume before us deals with the descriptive anatomy of the bones, joints, vessels and nerves, whilst the second volume, which will be ready next month, will contain the anatomy of the viscera, embryology, and general histology. The whole of this volume has been edited by Prof. Thomson, of Glasgow, aided by his demonstrator Mr. D. N. Knox, Mr. H. Clarke, and Dr. Gowers. So many important additions have been introduced that we are tempted to a longer review than is usual in the case of such an old and well-known work, and we are delighted to find that these alterations reflect the greatest credit on the judgment of those engaged thereon, and that this new edition maintains the place of the old ones, as a worthy outcome of the best anatomical knowledge in this country.

The description of the bones is somewhat fuller than in former editions, but it is still meagre in proportion to the rest of the work. The arrangement of the cancellous tissue in their interior is scarcely referred to, and the muscular attachments are rarely pointed out. The new chapters on their morphology and on that of the muscles are particularly lucid and interesting, and, as might have been expected from the pen of Prof. Allen Thomson, are quite *au courant* with the latest researches in this branch of scientific inquiry. The section on the joints has undergone no material alteration, but the chapters on the muscles are considerably enlarged. The usual information on their attachments, relations, nerve-supply, and actions has been supplemented by a valuable account of their chief anomalies, derived principally from the papers of Wood, Macalister, and Gruber. A more complete description of the variations in the origin and course of the vessels and nerves is also given, and papers so recent as those of Duret and Heubner on the Cerebral Circulation have been laid under contribution. Dr. Gowers has furnished a very clear and succinct epitome of our knowledge of the deep origins of the cranial nerves. Quain's Anatomy has always been regarded as the most philosophical and correct text-book in this country, and this volume will materially increase such a reputation.

The letter-press is much improved by the change of publishers, and we can only regret that the engravings still detract from the value of the book. Most of them are only half the natural size, and some of them are even less than this. The representations of many of the bones, especially of the head, are useless to the student, and too many of the plates of the vessels and nerves are so small that they are overcrowded with details, and so become a hindrance rather than an aid. We much wish that full justice had been done to the text of the book by the introduction of coloured illustrations, equal in distinctness and artistic finish to those contained in Henle's magnificent work.

Milk in Health and Disease. By A. HUTCHINSON SMEE, M.R.C.S., F.C.S., F.G.S. London: E. Newman. 1875.

MR. SMEE has collected in this little volume the results he has obtained by a number of experiments on the milk of his own cows and on that of other dairies. The research has been one of considerable labour. Although we cannot but think that the author has in many cases proved points that no one doubted, and in others permitted himself to be swayed by a bias which, though commendable from the moral, is objectionable from the scientific point of view, we willingly give him credit for industry as well as honesty. There are, moreover, in the volume some statements that are interesting and important.

The conclusions suggested by Mr. Smee are stated on p. 21. It will be convenient to examine them *seriatim*.

"1st. That milk from individual cows is liable to considerable variation."

Everyone knows this, and Mr. Smee need hardly have devoted two-thirds of his book to a record of the daily observations by which he convinced himself of the fact. He might as well have asserted as a "conclusion" that milk always contains casein.

"2nd. That it is possible for good average milk to be watered to a limited extent without detection."

This also is familiar to everyone. The imperfections of our methods of milk analysis are well known, and are in part a necessity. Rich milk can, of course, be watered down to something like the condition of poor milk without risk of detection, and it is highly probable that very poor milk has in some cases been condemned as adulterated. Mr. Smee prepared seven samples of adulterated milk by adding one-third of water to genuine milk. In one case the water used was sewage-water; in the others various foreign substances, such as silicate of soda, sulphate of soda, boracic acid, and infusion of linseed, were introduced. He sent these samples to "a friend, an analyst," who naturally got very unsatisfactory results, but who remarked that "in ordinary cases" he should have made a fuller investigation into such remarkable samples. That the unfortunate analyst did not discover sewage, linseed, or even the mineral compounds, will surprise no one not utterly ignorant of the subject. Mr. Smee does not even give us the composition of the milk he used, so that we cannot tell the real value, as compared with a standard of minimum quality, of the analyst's conclusions.

"3rd. That the casein, under certain circumstances, undergoes modification, both physical and physiological."

This refers to a phenomenon "only seen on three or four occasions"—namely, the passage of casein through a dialyser when milk from cows fed on sewage-grass was placed on it. Confirmation is clearly required, and it would be particularly desirable to ascertain whether ordinary milk does not sometimes exhibit the same peculiarity.

"4th. That the blood of milch cows affects the quality of the milk."

As thus stated this dogma also is admitted on all hands; but what is really intended is the assertion that the milk from a cow fed on sewage-grass is dangerous and unfit for food. That this conclusion was reached will surprise no one, for everyone knows it was foregone. Of course "the milk derived from the cow fed on sewage-grass went putrid and stank after thirty-six hours, and the butter from sewage-grass-fed milk became rapidly rancid compared with milk from cows fed on ordinary meadow-grass." We will not deny the facts, as alleged, not having been present at the experiments, but considering the number of sewage-farms in all parts of the country, and the high probability that peculiarities so striking, and so easily observed, could not for so many years have escaped detection, we must certainly for the present decline to accept them. "There are more false facts in the world than false theories," said a shrewd observer. On the other hand, however, it is right to mention that at Beddington and some other farms, though not at all, the grass is often cut too soon after the last application of sewage. A clear fortnight should always be allowed to elapse between the last application of sewage and the cutting of the grass, in order to permit the complete absorption and assimilation of the manurial ingredients of the sewage. A farmer would never think of cutting his grass directly after the application to it of stable manure, and yet this would be little more than an equivalent to the practice often followed on sewage-farms. Possibly this practice may account for the difference in composition observed by Mr. Smee between infusions of meadow- and of sewage-grass. He does not tell us, however, whether in each case he used the same kind of grass.

"5th. That milk can be the vehicle of contagion—by direct communication of the contagion, either by the water used for purposes of adulteration, or by the vessels in which it is stored being cleansed with impure water; by the absorption of the contagion by the exposure of the milk to deleterious gases. That in extreme instances power to communicate disease is produced in the milk itself, probably from an altered secretion of diseased animals."

Though there is no great novelty in these conclusions, and though the first cannot be said to flow from Mr. Smee's experiments, they are all probably true, and some of the reported experiments have interest as tending to strengthen them. Thus milk exposed to sewer gas and to the gases of putrefaction became rapidly putrid itself, and acquired actively poisonous properties.

"6th. That the methods now employed by public analysts are not sufficiently delicate to detect the minute physiological changes which may at times take place in so complex a fluid as milk."

It is really absurd to state so pompously so evident a truism. Of course the methods now in use are inadequate for such a purpose, and all we can say is that if Mr. Smee will only show us how to detect the "minute physiological changes" in question, chemists will very gladly adopt his method.

A Course of Practical Instruction in Elementary Biology. By T. H. HUXLEY, LL.D., Sec. R.S., and H. N. MARTIN, B.A., M.D., D.Sc. London: Macmillan and Co. 1875.

THIS, as any work which Professor Huxley undertakes is sure to be, is a most excellent little book. It is based upon the plan of instruction pursued by the distinguished Professor in his classes at South Kensington, and consists of a series of descriptions of certain typical forms of animal and vegetable life, supplemented by full and precise directions for laboratory work, by which the student can verify for himself the characters described at the commencement of each chapter.

The course is so planned as to lead from the lower to the higher forms, and it consists of thirteen sections. The first of these deals with yeast, the second with protococcus, which is followed in succession by the proteus animalculi, bacteria, moulds, stoneworts, the bracken fern, the bean plant, the bell animalcule, fresh-water polype, fresh-water mussel, fresh-water crayfish and the lobster, and finally the frog, which is taken as the type of the vertebrate sub-kingdom, and to which is devoted about two-fifths of the book.

To intending medical students this work will prove of great value, and we hope the day is not far distant when the plan of instruction here pursued shall be introduced into every school. If only our examining bodies would insist upon some biological knowledge being shown in their preliminary examinations, much weary labour would be saved to the student who now begins his study of anatomy without any necessary knowledge of the structure of the lower forms of animal life, and a wider and deeper interest would be given to the dry details of human structure by the application of principles of morphology. We welcome this book, then, as a valuable addition to elementary education, although we venture to state that the boy (or girl) who has faithfully worked with it will be far better educated than the word "elementary" implies.

THE DISCUSSION ON SYPHILIS AT THE PATHOLOGICAL SOCIETY.

THE following is the text of the summary of the points with which Mr. Jonathan Hutchinson intends to open the Debate on Syphilis at the Pathological Society in February:—

After adverting briefly to the doctrines at present received as to the nature of syphilis, and also to certain sources of error in the attempt to study its course, the following topics, amongst others, will be introduced for discussion.

At what period in its course does syphilis cease to be a blood disease?

The peculiarities of the inflammatory process when caused by syphilis: its tendency (1st) to solid growth and (2nd) to ulceration and phagedæna.

The importance of a better knowledge of the internal pathology of the secondary stage, with a view to the better comprehension of the relationships which exist between the secondary and tertiary phenomena. (It will be suggested that visceral lesions, gummata, &c., are more common in the secondary stage than is supposed.)

The remarkable differences which exist between acquired and inherited syphilis.

(*a*) The great rarity of disease affecting the nervous centres in inherited syphilis.

(*b*) The rarity of tertiary gummata in inherited syphilis.

(*c*) The frequency of symmetrical forms of disease in the tertiary stage of inherited syphilis.

The absence of any real relationship between scrofula and syphilis; and the specificity of all the phenomena which belong to the latter, at whatever stage observed.

THE Glasgow University Court has agreed to recognise the Lectures of Dr. David Foulis on Pathology, as qualifying for the degree of M.D. of the University.

THE LANCET.

LONDON: SATURDAY, JANUARY 8, 1876.

Two letters will be found in another part of to-day's LANCET protesting in strong terms against the proposal of a Committee of the College of Physicians of London to the effect that the College should abolish that one of its bye-laws which provides "*that no Fellow, Member, or Licentiate of the College shall assume the title of Doctor of Medicine, or use any other name, title, designation, or distinction implying that he is a Graduate in Medicine of a University, unless he be a Graduate in Medicine of a University.*" One of these letters is from a Fellow of the College, and the other is written by one who signs himself "An Old L.R.C.P. Lond." The latter gentleman is not a graduate, and is therefore presumably one of those whom the College, or rather the Committee, designs to please. It is true that, if our report of the views of the Committee be correct, they recommend that the bye-law should be abrogated only in favour of Fellows and Members—a limitation which savours very much of partiality; but it is easy to see that such a limitation could not be preserved, and that what is courteous to Fellows and Members would only be a little more courteous to Licentiates. So far from being pleased, "An Old L.R.C.P. Lond." is indignant at such a proposal, considering it to be unworthy of the College, and calculated to bring this institution down to the level of others which have traded on a popular fallacy that they had the power of conferring the title of Doctor. So acute is his sense of the loss of character which the College would sustain by adopting the suggestion of the Committee, that he says he will be ready to give back his diploma if the measure is carried into effect. "F.R.C.P.," in his letter, takes much the same ground as "An Old L.R.CP. Lond.," and argues that if the suggestion of the Committee is accepted the College will be usurping the prerogative of the Universities, and will do something towards the creation of "bogus" in England. He considers that the College will incur contempt and blame if it takes the course recommended by the Committee.

We do not wonder at the warm feelings expressed by our correspondents. We confess that, when we first saw the Report of the Committee of the College, we mistrusted our eyes; and it was only on a second reading of the Report that we could believe it possible that a committee of the London College could have recommended the creation of a title by courtesy. For it must be clearly understood that the question of title by courtesy is in a very different position from that which it held twenty years ago. A good deal of loose opinion was current at that time, which the course of events has entirely modified. Chief among these events three might be named. First, the Medical Act of 1858. The essence of this Act, as affecting the medical profession, is to give definitiveness to titles, and to provide that titles be not used in any false way. Not only is it illegal for persons unqualified to use titles and descriptions which imply that they are qualified, but it is illegal for persons with one kind of qualification to use the titles proper to another kind of qualification; at any rate, it is impossible for any scrupulous person to read Clause 40 of the Medical Act without feeling that any person so acting lays himself open to the charge of violating the law. Among other influences which have powerfully modified public opinion in this matter, is the effect produced by one of the examining bodies in attracting men to the examination for its licence by encouraging the notion that this licence gave a right to the title of Doctor. The late Professor SYME, in our columns, spoke of this College as having done a "thriving trade" in this way. We do not dispute the accuracy of this statement. If the London College wants to do a thriving trade it cannot do better, we imagine, than follow the example of the body to which we allude. But it is too soon to credit the London College with any motive so low as this. It must be remembered that the recommendation in question is simply the act of a committee, and that the College has not yet any responsibility for it. Another event affecting public opinion on the subject of titles is the exposure of the shamelessness with which the highest titles, medical and otherwise, have been sold in the United States, simply for money. This scandal has been so glaring as to have engaged the attention of the Education Bureau of the Government of the United States, and the charter of the delinquent body has been withdrawn. In short, the whole tendency of opinion in the profession has been towards restricting the use of the title of Doctor to those who had obtained a veritable degree from a university after due examination. The Licentiates of the College alluded to above have used the title of Doctor freely, but with little sanction from the profession. It would be utterly impossible to admit the justice of permitting them to use it while at the same time refusing it to the Licentiates of the Society of Apothecaries who have passed an examination of the same character as that of the College to which we refer.

We cannot doubt that the London College will maintain its existing bye-law, which is highly honourable to itself, and has been a most effective rebuke to the sister College. Two things are clear: first, that it cannot abrogate the bye-law in favour of Fellows and Members, and not in favour of Licentiates; the other, that by abrogating it, it will lose the respect of the best of its own Members, and, as our correspondent shows, of the best of its own Licentiates. For ourselves, we are resolved to adhere to the principle that we have often announced—to call no man Doctor who is not prepared to answer the question, "Doctor of what?" Purity of titles is a moral question in the profession; and the sacredness of titles cannot be maintained if the highest medical title is to be attached as a matter of courtesy to the lowest qualifications. In our opinion, nothing has been more injurious to the profession than the action of one College of Physicians. And if the London College is to follow suit, the Universities will suffer a great blow and discouragement. It is not in their interest, however, chiefly, that we beg the London College to maintain its existing rule; it is in the interest of the profession and of the higher kind of medical

education. Degrees are valuable as conferring distinctive titles. If these titles are to attach to other and lower qualifications, men will not seek the higher ones. We look to the College of Physicians of London to use its great influence in the future, as in the past, against all falseness and sham in the use of titles.

THE Pope has proved at least one thing infallibly, and has rendered at least one service to Rome. He has proved that an octogenarian, suffering from a chronic disease and subjected to much hard work, can live in the most unhealthy part of the city during the whole twelvemonth for five consecutive years, and retain a physical and mental vigour worthy of his prime; while he has thereby served to vindicate for Rome a character for salubrity which it has hitherto been the habit to withhold from her.

His Holiness, indeed, has never enjoyed such a measure of health of mind and body as he has been blessed with since the Italian occupation. Had his most sagacious physicians prescribed for him the imprisonment in the Vatican to which he has voluntarily consigned himself, they could not have given better and, as the result has proved, more beneficial advice. For one thing, he has been spared that exposure to vicissitudes of temperature which is the real cause of three-fifths of the ailments contracted, especially by the stranger, in Rome, and which without doubt shortened the days of his three immediate predecessors. LEO the Twelfth died of a chill caught in one of the vast basilicas while assisting at a pontifical function. PIUS the Eighth owed his premature decease to a pulmonary affection similarly contracted. GREGORY the Sixteenth, whose habits were not strictly ascetic, also paid the penalty of a bronchial attack sustained in a gusty basilica; but from this source of danger, so formidable to old age, PIUS the Ninth has for the last five years been exempt, thanks to that imprisonment for which he claims the compassion of the faithful.

Pulmonary affections are the chief ailments to be guarded against, particularly by the stranger, in Rome—a city which, according to a distinguished German physician, would be an eminently safe one, even for the invalid, *were it not Rome*—were it not, in fact, a vast museum of basilicas churches, and artistic galleries, with their cold marble interiors, and the temptation they hold out to linger longer in them than the sight-seer, generally fatigued from attempting too much within a short time, ought in prudence to risk. The illnesses incurred from this cause constitute, as we have said, three-fifths of the ailments which the foreign resident contracts, and renders him peculiarly susceptible to whatever local epidemic may for the time be prevalent.

Roman fever, as it is called, has long ceased to have any terror for the Roman physician, and ought by this time to have none for the tourist, but for the tenacious vitality which tradition, especially if assiduously fomented, seems to enjoy. In his able monograph, entitled "L'Igiene della Campagna e Città di Roma," Dr. BALESTRA has proved—what indeed statistics, if accurately read, had long ago demonstrated—that Rome is, during a winter residence, one of the healthiest cities in Europe, and, even in the late summer and early autumn, much more healthy than many other continental capitals which have not her bad name. Her mild climate, above all the inexhaustible abundance and marvellous purity of her water-supply, oxygenated as it is in its constant flow through fountains and artificial jets and cascades in the open air, are special advantages which her system of drainage, much improved of late years, has hardly ever impaired. Her people—the *cives Romani* proper—have always, as LANCISI remarked a hundred and fifty years ago, been among the most robust in Italy—a fact which the recent recruiting returns have firmly established; and the stranger within her gates has generally had his own imprudence to thank for any febrile or pulmonary affection he may have contracted.

But it has often been asked, and is so still,—How is it that the deaths in Rome are generally in excess of the births? The answer is very simple the moment the facts are known. In Roman statistics the city itself is included in the Agro Romano or Campagna, and the mortality of the latter is put down as appertaining to the former. Now, the stable population of the Campagna is something less than 3000, while its adventitious population amounts to 20,000, and is composed of mowers and reapers who come for the summer and autumn months, leaving their families behind them, and who succumb to the malaria in considerable numbers without local reproduction of their kind. Another cause of the apparent excess of deaths over births is the presence in Rome of a large celibate community of priests and monks who die without presumably adding to the population. Another is the temporary residence of successive relays of strangers, often in infirm health, whose deaths are also unbalanced by an equivalent reproduction. Lastly, there can be no doubt that, while the above facts would bring the number of actual deaths and births to the proportion of the healthiest countries in Europe, there is in Rome a great and perfectly gratuitous infantile mortality, due not so much to the prevalence of children's diseases as to the pernicious system of foundling hospitals, with the consequent cheapening of infant life, and the numbers that die of privation and neglect before they ever reach the hospital.

Typhoid fever has never, within the memory of the oldest practitioner in Rome, been epidemic in the city. After such a flood as that of 1870, when the sewage was forced back from the Tiber into the drains and infiltrated the surrounding soil, there were more sporadic cases of typhoid than usual. But that form of continued fever was never a scourge of Rome. The local fever, which has many features in common with ague, is simply an importation from the Campagna, whose insanitary statistics are included in those of Rome herself, while they ought to have no terrors for the ordinarily healthy and prudent visitor. Even in the late summer and early autumn, when the Roman fever assumes something like endemic proportions within the walls, a few ordinary prescriptions have but to be practised to secure almost perfect immunity from attack. Avoidance of sudden vicissitudes of temperature when the body is fatigued or heated; the constant use of flannel, more or less light, next the skin; keeping early hours; and good but not stimulating diet,—such is the regimen which has enabled many a northern artist to make the Eternal City his home, summer and winter, for a long lifetime. In Rome, indeed, as

everywhere else, the individual has only to be the intelligent and careful custodian of his own health, and he may brave with impunity even the neighbouring Campagna,—with whose sanitary conditions, however, those of the city proper have little in common, and ought never to be confounded.

THE capacity possessed by the colon for absorbing and digesting food introduced in it, is a problem of much interest for physiologists, but of still greater importance to physicians. The degree to which it may be trusted as a means of introducing food into the system is of vast importance in the treatment of disease. Great confidence is at present placed in its digestive and absorptive powers. How far the confidence is justified is a matter of some doubt. The researches on the subject which have hitherto been made have been indecisive; and a recent very important addition to the experimental facts at our disposal, which has been made by Dr. MARCKWALD, of Heidelberg, does not put the matter altogether at rest. The conditions under which his investigation was made were unusually favourable, and the observations conducted with such accuracy that they deserve careful notice.

The researches, which are described at length in a recent number of VIRCHOW'S *Archiv*, were made upon a man in whom, in consequence of the sloughing of the anterior wall of a cæcal hernia, and from the operation to relieve his hernia, a large cæcal fistula resulted. A large portion of the posterior wall of the cæcum had become extruded from the wound in the form of an oval tumour 5 in. long and 2½ in. broad. In it three openings could be found, one of which communicated with the small intestine, one with the vermiform appendix, and one with the ascending colon. Thus the colon was completely isolated and perfectly accessible, so that its whole length could be conveniently employed for the purposes of experiment. The previous observations which have been made in similar circumstances are open to the objection that the intestine was not perfectly isolated, or that only a small portion of the intestine was available for observation, in many cases only the lower end of the intestine. Hence the results of the experiments have hitherto given a very imperfect representation of the normal process of digestion. The secretion of the large intestine is slowly formed, and food, if it is to be digested at all, must be brought in contact with different portions of the intestine to obtain the full effect. Further, the higher part of the intestine contains more glands, and so offers a more favourable subject for experiment.

The three chief questions to be answered were—first, Does the large intestine secrete a substance capable of transforming starch into sugar? Secondly, Has its secretion a digestive action on albuminous bodies? Thirdly, Does any absorption of nutritive substances take place from the colon; and, if so, in what condition must they be? The investigations on the formation of sugar, and the experiments on digestion, were made in two ways: partly with secretion from the intestine obtained from the fistulous opening of the colon, and kept at a certain temperature; partly by the introduction of those substances into the intestine. For the observations on the transformation of starch, new potato-starch was employed; for the experiments in digestion, raw fibrin treated with alcohol, and also coagulated albumen. The observations on the absorptive power of the intestine were made with water, liquid white of egg, and peptone solutions. Between each experiment the intestine was allowed a thorough rest.

The question of the transformation of starch was quickly settled in the negative. Neither in the body nor out of it did the secretion transform starch into sugar. It was therefore clear that no ferment capable of doing this is present in the human colon. A much less expected negative was the result of the experiments on digestion. No effect was produced on fibrin or coagulated albumen by their maceration in the secretion of the colon. Nevertheless, when these substances were introduced into the intestine, an examination of the fæces showed that although most of the albuminous constituents were unchanged, yet a certain proportion had been transformed into peptones. It was thought probable, however, that these peptones had been formed rather by a process of decomposition than of true digestion. The residue had a putrid smell, and contained vibriones; and, moreover, this change was only found when the substances had remained in the intestine for twenty-four hours or more. A small quantity of nitrogen disappears in the transmission of the albumen &c. through the intestine; and this has led some previous observers, who had ascertained the same fact, to infer that digestion occurred. In the opinion of MARCKWALD, it is to be ascribed only to putrefactive changes.

The important question remains, however: How far does the mucous membrane of the colon possess the power of absorbing liquid substances introduced into it which require no digestive process for their solution? Preliminary observations were made on the absorption of water; afterwards the absorption of peptones was tested, and lastly that of fluid albumen. The absorption of nitrogenised substances was estimated by the quantity of nitrogen eliminated in the urine. The observations on the absorption of water were attended with much difficulty, since the water unabsorbed after a given time could not be collected. The conclusion from the experiments was that the absorption of water takes place very gradually, and for the absorption of half a pint of water at least twelve hours are needed, and probably more. The experiments on the digestion of albumen had shown that a small increase of nitrogen in the urine followed the decomposition of albuminous bodies. This was considered a proof of the absorption of some of the peptone thus formed. How far is a quantity of ready-formed peptone absorbed? A carefully prepared peptone proved in large quantity very irritating to the intestine, producing such a degree of irritation as to effectually prevent its absorption. Half a pint of peptone solution did not in the slightest degree augment the amount of nitrogen secreted by the urine. VOIT and other observers had found, by experiments on dogs, that the absorption of fluid albumen from the colon did not occur unless common salt had been added to it. CZERNY and LATSCHENBERGER, from experiments on man, have recently come to the conclusion that fluid albumen may be absorbed without the addition of salt, which rather hindered than facilitated the process. Dr. MARCKWALD'S observations, which were unfortunately

limited to four, failed to get any evidence of the absorption of albumen, with or without the addition of salt. In no instance did he find evidence, by an increase of nitrogen in the urine, of any absorption from the intestine. He concludes, then, that, under all circumstances, absorption from the colon is a very slow process, and is confined to water and a small amount of peptone, especially when the latter is slowly formed in the intestine itself. He points out further that these conclusions receive indirect corroboration from the well-nourished state of patients in whom, as in the subject of his experiments, the mucous membrane of the colon is, by an artificial anus, withdrawn from the absorbing surface of the alimentary tract.

It cannot be considered that these experiments, important as they are, decide the questions at issue. The daily clinical experience of the value of nutritive enemata, if not reduced to clear and unchallengeable data, is very strong, and is certainly opposed to the conclusion drawn from Dr. MARCKWALD'S observations. Moreover, these conclusions are in opposition, it must also be remembered, to the observations of almost all previous experimenters, some of which, as those of STEINHAUSER, were made under conditions closely analogous. It is clear that more observations are needed before the question can be considered at rest. Opportunities for such observations occur rarely, but it is important that they should be seized whenever they do present themselves, and perhaps no better mode of investigation can be adopted than that followed by Dr. MARCKWALD.

AN important contribution on the subject of the Pathological Anatomy of the Endemic Diseases of Marshy Districts, by Dr. A. KELSCH, is contained in a late part of BROWN-SÉQUARD'S *Archives de Physiologie*. Dr. KELSCH appears to have had large opportunities of studying these affections; since he admitted, in the course of a single year, no less than 1181 patients suffering from acute or chronic fevers of paludal origin, and devoted himself to an investigation of the changes occurring in the blood and in the principal tissues and organs. On examination of the blood in simple fevers he found that, whether the marsh miasm proves rapidly or slowly fatal, profound alterations are perceptible in the blood, though there may be no marked changes in the physical characters of the tissues. These alterations consist in an absolute diminution in the number of the corpuscles, in an augmentation in the volume of the red corpuscles, and in the development of black pigment which is not normally present in the blood. In regard to the first point, Dr. KELSCH shows from daily enumerations, commenced at the period of the first attack of the fevers, that the diminution in the number of the corpuscles, or "oligocythæmia," is very rapid and considerable in all the forms of marsh fever. Thus in one case the number of corpuscles, which amounted at first to 4,892,500, was, in the course of twenty days, reduced to 1,430,398 in the cubic millimeter. The reduction in the number was excessively rapid during the initial period of the fever, when the febrile symptoms were more or less continuous or remittent, the patient losing no less than 2,000,000 corpuscles per cubic millimeter during the first four days. A second period succeeds, corresponding to the quotidian or tertian type assumed by the fever, during which the loss, though continuous, is slower; and this is followed by a third period, characterised by quotidian type of the fever with intervals of apyrexia, in which the number of the corpuscles, though reduced to a very low figure, yet fluctuates. In one case the number of corpuscles fell to 583,000 red corpuscles in the cubic millimeter, which is about one-tenth of the ordinary amount. The fever had, however, in this instance lasted with intervals for a year, and the patient had suffered from previous attacks during the epidemic season. The white corpuscles appear to undergo still greater proportionate diminution than the red, notwithstanding the augmentation in the volume of the spleen.

Careful observation of the corpuscles themselves, suspended in artificial serum, showed that they underwent considerable alteration in size, three varieties of form being present. These were, first, large pale corpuscles; secondly, smaller, strongly tinted, crenated corpuscles; and, thirdly, smooth, highly coloured, and highly refractile corpuscles. Of these forms, the first became more abundant as the oligocythæmia became more strongly marked—sometimes, in fact, constituting the whole mass of the corpuscles. As the blood regenerated itself in the progress of recovery, they appeared to be replaced by the other two forms. There was then, in addition to the oligocythæmia, distinctly marked macrocythæmia.

In the most pernicious forms of marsh fever, Dr. KELSCH observed extraordinary rapidity in the diminution of the red corpuscles, the blood losing in forty hours 1,282,160 red corpuscles per cubic millimetre; prompt regeneration of the blood at the termination of the pernicious attack; and, lastly, an increase, both relative and absolute, in the number of the white corpuscles, the proportion of white to red rising steadily from 1 ÷ 300 to 1 : 70.

Lastly, Dr. KELSCH insists on the importance and the frequency of the impregnation of the blood with black pigment or melanæmia occurs in marsh fever of the pernicious form, in cachexiæ, and even in simple fevers. It is met with in the blood traversing the vessels as well as incorporated with the tissue of the spleen, of the medulla of the bones, and of the liver, but is occasionally absent. The pigment is most abundant in the blood of the venæ portæ and splenica, whilst it is much less in quantity in the blood of the venules of the jugular. The pigment appears in the form of small granules, black in colour and rounded in form, surrounded by protoplasm. It is not improbable that the pigment proceeds from the disintegration of the red corpuscles.

THE marked immunity from disease enjoyed of late years by the town of Salisbury has given rise to a correspondence between the medical officer of health for the district, Mr. Winzar, and the Registrar-General. The latter having requested to be furnished with some information which would explain the continuous reduction in the death-rate of the town, Mr. Winzar, in reply, stated that the diminished mortality was undoubtedly owing to the introduction of an excellent system of drainage and to an abundant supply of pure water. Also house-to-house visitation is systematically practised, and dilapidated dwellings destroyed; while, not least, great care is taken to remove all noxious matters from courts and streets.

Annotations.

"Ne quid nimis."

OVERWORK AT SCHOOLS.

IN an interesting communication to our columns last week, Dr. Farquharson differed from the opinions recently expressed by us with respect to the evil effects of overwork at school. He does not admit the charge to be "fully proven," and assumes that "there is no specific evidence of present injury." He has arrived at this conclusion from the experience he acquired at Rugby, as medical officer to the school and the several preparatory establishments connected with it. It will be remembered, however, that we especially stated that at our leading public schools the amount of work required was far from excessive; indeed, we recommended the public school hours to be adopted as a standard of what may safely be demanded of a boy. Rugby holds a prominent place among our public schools, and, judging from inquiries made there, the hours of work are not in excess of the ordinary public school standard. We have no means of ascertaining the hours at the preparatory schools referred to, but it is reasonable to suppose they do not differ materially from those of the larger school; indeed, Dr. Farquharson admits that the boys have "ample time for recreation, active sports, and frequent holidays." It is evident that Dr. Farquharson's experience of school life, extensive, no doubt, as it is, has been acquired under extremely favourable circumstances, and we are, therefore, not surprised that few cases of overwork have come under his cognisance. As we have frequently stated, such cases are not generally to be met with at the large public schools, but in the small institutions and private establishments which abound in large towns, and whose advertisements may be seen in any of the daily papers. The *prestige* attaching to these places is usually so small that they are unable to attract a teaching staff of anything like the ability and experience which is at the disposal of the public schools, and to make up, therefore, for the defect in the quality of the teaching, additional strain is thrown on the learners, imposing additional hours of study. Dr. Farquharson asserts "it would be little to the credit of any proprietor of a private educational establishment were he to neglect the laws of health, and send his boys home enfeebled and worn out from a too heavy mental strain." Our experience, however, leads us to a contrary conclusion. We believe the vanity of parents induces them to disregard the weakness and jadiness incident to overwork, and to pass it by with the remark, "The dear boy is growing so fast—he is so anxious about his work." Kingsley has censured this parental vanity in his tale of "The Water Babies," in depicting the fate of the young Tomtoddies in Examination Land, "where the foolish fathers and mothers, instead of letting their children pluck flowers, make dirt-pies, &c., kept them always at lessons, working, working, working; learning week-day lessons all week-days, and Sunday lessons all Sunday, and weekly examinations every Saturday, and monthly examinations every month, and yearly examinations every year, everything seven times over, till their brains grew big and their bodies grew small"; and when one of the children died "the parents were highly delighted, and considered him a saint and a martyr, and put up a long inscription over his tomb about his wonderful talents, early development, and unparalleled precocity." One of these schools has recently been visited by us in consequence of frequent complaints that had reached us from parents that the boys returned home thin and out of sorts. We could find no fault with the sanitary or domestic arrangements, and in this case certainly the tutorial staff were fully up to the mark; but the hours of work, not including that done on Sundays, amounted to no less than forty-eight and a half hours a week, or rather more than eight hours a day! This is no exceptional case, and, if needful, we can give numerous other instances that have come under our notice. We repeat that eight hours' mental work is too much for growing lads to bear, and where it is exacted it is impossible to allow "that ample time for recreation and active sports" which Dr. Farquharson properly considers as necessary to counteract the evil influence of overwork.

THE OUTBREAK OF CHOLERA AT SIMLA.

SIMLA, as everyone knows, is *par excellence* the great health resort of Indian Government officials, and a severe outbreak of cholera, similar to that which occurred there last year, becomes therefore a matter of serious import. Those who quit the plains of Bengal for the hills may, no doubt, escape the heat, but they can have no assurance that they are leaving cholera behind them. Man is not responsible for the bad climate of the plains of India, but he has only himself to thank if, by want of ordinary foresight and prudence, he has managed to convert what was originally a healthy and beautiful climate into an unhealthy one. And this seems to have been the case as regards Simla. A site originally selected and deemed sufficient to supply the wants of a few Europeans is now occupied by a large number of these, and a far larger number of natives, but no attempt has been made to ensure that practical sanitation kept pace with this greatly increased occupation. And the consequence has been that what was once a delightful hill-station has become so unhealthy that its temporary abandonment has even been suggested. We glean from the last *Indian Medical Gazette* some facts regarding the late cholera epidemic at Simla which serve to emphasise the truth and point the moral of what we have been saying. What may be termed Simla proper is the most crowded part of the sanitarium, and it is also the most insanitary part. It encloses a gorge into which is poured the filth of the densely-populated neighbourhood. It was on this locality that the brunt of the outbreak fell. Here 138 cases occurred, and 75 in the vicinity. Nowhere else was any special concentration of the disease manifested. With the exception of a limited area to the north-west, which escaped, cases were dotted all over the station. No definite progress of the disease through the station was traced, nor are any facts adduced indicating its propagation by infection and transportation. The population of Simla during the outbreak was estimated at 15,000, of which 13,500 were natives and 1500 Europeans. Surgeon-Major Adley, in his report, tells us that of the former class 315 were attacked and 170 died, and of the latter 25, with 14 deaths. One remarkable feature of the outbreak was the very large preponderance of males attacked. The sanitary state of Simla prior to and during the epidemic, according to the official report from which we are quoting, appears to have been unsatisfactory in the last degree. The excessive prevalence of fever may be accepted as a good index of the exceptional insalubrity of 1875. Although no evidence is brought forward to show that water agency was concerned in the dissemination of cholera, the fact remains that the water-supply is scanty and impure, and no proper means of storing or conservation exist. Our contemporary points the way to the remedy for such a state of things in saying that it is, in the main, a question of engineering; and we are glad to be assured that Mr. William Smith, whose name is associated with the supply of pure water to Calcutta, has met Dr. Adley and others in committee for the purpose of

devising measures for a water-storage beyond reach of pollution, and its distribution by pipes, as well as for remedying the other sanitary defects in Simla.

THE BURNING OF TRAINING-SHIPS.

IT is proverbial that troubles seldom come singly, and the frequency with which a batch, as it were, of accidents occur nearly together, or in close succession, would almost seem to justify the inference that such occurrences could not be simply coincidences. Whilst the unfortunate destruction of the training-ship *Goliath* is still fresh in our recollection comes the news of the burning of another vessel of the same character, the *Warspite*, off Woolwich. Happily, assistance was at hand, and the boys were rescued; but people will begin to believe that a sort of fiery fatality attends such ships. We are no wiser, of course, than the rest of the world as to the causes of these fires. At first sight it seems very strange that a ship floating on, and being on all sides surrounded by, an aqueous element, should become a prey to a fiery one. Nothing would appear easier than to bring the two together, and extinguish the one by the other. But a little consideration will show, what has been proved by repeated experience, that a fire on shipboard must always be a very formidable occurrence. A wooden ship is constructed of very inflammable materials, which are so adjusted to facilitate the spread of fire that the vessel might almost be compared to a grate, with the fuel laid ready for lighting. If the fire on board ship be not discovered whilst still of very limited extent, all exertions may prove futile to extinguish it, notwithstanding a ready access to, and an unlimited supply of water. The ascending flames and heat soon lay hold of the upper portions of the ship, and the great bulk of the water pumped in of course descends to the lowest parts of the vessel, where it can only be of efficacy so long as the combustion is limited to those parts. The fact, too, of a vessel being commonly in a position exposed to the wind is another great source of danger in case of fire. It would be easy enough to extinguish a fire at first, and whilst still of very limited extent, if only it were immediately detected, and the means for putting it out were at the same time equally ready and available—conditions on which we obviously cannot count. And we do not see how it would be practicable, if even possible, in our present state of knowledge, to render the materials of a vessel incombustible. There only remains, then, to fall back on precautionary measures, and we are bound to say that in the case of the *Warspite* these appear to have been of a very stringent character. The amount of fluid inflammable materials should be reduced to a minimum, lights &c. should be entrusted to a special staff of adults, the occupants of a stationary vessel should be well drilled and trained to encounter such an emergency as fire, and there should be a sufficient provision of boats ready and available in case of its occurrence.

DEATH IN THE BATH.

FEW accidents are sadder than the casualties which now and then chequer the usually smooth course of hospital management. The carelessness which is their common cause cannot but arouse just indignation; but while reflecting on such an accident as that which occurred in the Great Ormond-street Hospital for Sick Children on Christmas day, it is right to remember how rare such fatalities are. Hospital work is carried on by instruments which possess to the full the common human liabilities, and however carefully selected and carefully trained the nurses at our public institutions may be, occasional carelessness in the most careful, occasional mistakes in the most prudent, will mar the efficient working of the best organised establishment. A hasty observation on the temperature of a bath may make all the difference between the life and death of a patient. In the instance to which we have referred, some such carelessness was evidently the cause of a very sad "death by misadventure." A child two years old was put into a bath, the temperature of which the nurse had ascertained with the hand instead of with the thermometer. The child was placed in the bath, screamed as children will, and as this child especially often did, and in a few minutes was scalded, as it afterwards proved, to death. No fault is to be found with the hospital arrangements. A thermometer was provided for use in the bath, the nurse had apparently been enjoined always to use it, but in her Christmas haste she used her hand instead of the thermometer—perhaps left the hot-water tap running, and the disaster happened. The use of the hand instead of the thermometer to ascertain the temperature of a bath is an act of culpable negligence, but it is, we fear, not an uncommon event. It should be very strictly forbidden. All physicians know how fallacious a guide the hand is in estimating temperature. The heat of the hand, the state of the cutaneous vessels and nerves, affect very considerably the appreciation of temperature. A hasty dip of the hand into water often conveys the impression that the temperature is much below the actual degree. The nerves of the skin are slow in being stimulated by heat. A hand cooler than a liquid cools for the moment the liquid which is in immediate contact with the skin, and it requires time for a fresh quantity of the liquid to come in contact with the skin, and time for the full stimulation of the nerves, in order that the temperature be accurately estimated. It would be well if some regulation were in force at our institutions which might secure the invariable use of the thermometer. This end might possibly be obtained, and the danger of carelessness in a considerable degree lessened, by a compulsory registration of the temperature of every bath given. If a nurse were required to furnish in writing a report of the heat of the water, as given by the thermometer, it would not be possible for her to evade its use except by an act of deliberate deceit. As carelessness is a more facile sin than falsification, there would be at least some safeguard against such an accident as that to which we have alluded.

NAVAL REMINISCENCES OF THE ASHANTEE CAMPAIGN.

THE last Report on the Health of the Navy contains a valuable summary of the medical and sanitary incidents of the Ashantee campaign, as regards the Naval brigade and Marine battalion employed on the Coast. The Report is compiled by Staff-Surgeon Henry Fegan, M.D., C.B., who was placed in medical charge of the entire force, which consisted of 310 men taken from H.M.SS. *Active*, *Druid*, *Encounter*, *Amethyst*, and *Argus*, and specially chosen on account of fitness as regards age and other physical conditions. Quinine was administered daily for some time previous to landing, the marches did not exceed thirteen miles, and were taken between 5 and 11 in the morning, in loose open file, at the rate of two miles and a half an hour, with a halt of seven minutes every hour, and a maximum carrying weight of thirty pounds south of the Prah, and forty pounds in Ashantee. Cold tea, lime-juice and water, or filtered water taken from streams were used on the march. The camp rules obliged all wet clothing to be changed immediately. One daily parade only occurred, bathing was allowed at 5 in the afternoon, and no one allowed from under cover between 11 A.M. and 4 P.M. Lime-juice was issued daily, and rum in the evening instead of at the dinner-hour, and in addition to a very liberal scale of diet, bread was baked

and served out daily. The men were medically inspected every day, and two grains of quinine in weak rum-and-water were served out to each soldier before the march commenced, as well as a small breakfast of cocoa and biscuit. All sick and wounded followed an hour in rear of the brigade, so as to ensure some amount of coolness and quietude, and a space of twelve feet between the hammocks was maintained on the march. Dr. Fegan had three colleagues, one of whom marched with the healthy, the second assisted him in hospital duties, and the third marched back from the Prah accompanying the sick and wounded from station to station. During the unexpected and disastrous delay of sixteen days at the Prah, fifty-two were placed on the sick-list, the hospital being formed of a large and commodious hut, with the sides entirely open by day, and closed by canvas curtains at night. Staff-Surgeons McCarthy and Cox had charge of this establishment, which included also a bell-tent for stores and another for the officers, all cooking being performed in the open. A convoy started every day for the coast, and on the return to the ships the entire sick convoy numbered 600 persons, including carriers, attendants, and servants. The ordinary hammock was found to be the most convenient arrangement for removing the wounded under fire, and in this and other duties no less than 510 native carriers were employed, all being placed under the sole charge and personal superintendence of the medical officer, who mustered them twice daily to examine their physical condition. A total of 450 Kroomen were landed from the squadron to carry provisions, ammunition, &c., and the daily sick-list of these men often exceeded thirty, the climate, hardships, and fatigue telling severely upon them.

"The diseases of the brigade arising from the influence of climate were fevers, dysentery, and diarrhœa, complicated and uncomplicated." Every man who exhibited any symptom of illness was immediately removed from the strength of the force. There are no noteworthy records of treatment, but, as we take it, no campaign was, as to the medical and sanitary departments, ever conducted on better prophylactic principles. The details of the medical duties were very minute, and were carried out with great precision, and the few pages in this Blue-book devoted to a description of them may be read with profit by all interested in the medical services, ashore or afloat.

PURE AND SUFFICIENT WATER.

LORD CAMPERDOWN opportunely appeals to the water consumers and ratepayers of London not to allow the time to slip by when it may be possible to give effect to the recommendations of the Commission so long ago appointed to investigate and report upon the metropolitan supply. The verdict of the commissioners condemns the waters of the Thames and the Lea as "sewage," and, reminding Londoners that seven out of the eight private companies which supply the whole district derive their commodity from one or the other of these pestilent sources, urges instant recourse to the deep water of the Thames basin, which can be obtained in abundance at a moderate distance from London. It seems strange that no action has yet been taken. It is true the Metropolitan Board of Works contemplates compelling the companies to supply water by meter, but the result of this measure, if it takes the shape of law, will be essentially mischievous. The free use of water is indispensable to public health. If the population is to be encouraged to practise a petty economy in this article by having it doled out to housekeepers at so much per thousand gallons, the consequences must be disastrous. We trust the proposal will be scouted by Parliament as worse than useless. It is manifest the supply of water can never be satisfactory while it is in the hands of trading companies. Let the municipalities take the matter into their own management; let the interests of existing shareholders be absorbed by the issue of corporation bonds in place of their shares, and the whole business will be placed on a reasonable footing. Artesian wells and works of a costly character must be constructed, and the capital required will have to be raised. It can be obtained by the Metropolitan Board of Works, by the Corporation of the City of London, or by any other public body, far better than by a private company, and henceforth the supply of an article which is as much a necessary of life as air or daylight will be in the keeping of the same authority which is responsible for the health bad water does so much insidiously to undermine. The subject has been discussed until it is provokingly plain. What we now need is not more weighty words, but deeds. *Priusquam incipias, consulto; et ubi consulueris maturè, facto opus est.*

THE PATHOLOGICAL SOCIETY.

IN the Report of the Council of this Society, read at the annual meeting on Tuesday last, it was stated that the number of members had now reached 545. In consequence of the increased number of members, and the larger sale of the Transactions, it was suggested that more copies should be published than at present. It was further suggested that specimens, other than those which may strictly come under the category of new growths, should be occasionally referred to the Committee on Morbid Growths. The names of Messrs. Butlin and Godlee have been added to this committee. With regard to the one year's tenure of the office of president, as suggested by Mr. Pollock in his opening address, the Council stated that they "were not prepared to adopt this suggestion on the present occasion." The adoption of the report was moved by Mr. Wood and seconded by Dr. Hilton Fagge.

The following is a list of the officers and Council of this Society who were elected during the evening:—President: George D. Pollock. Vice-Presidents: Wilson Fox, M.D., F.R.S.; Charles John Hare, M.D.; Sir William Jenner, Bart., M.D., K.C.B., D.C.L., F.R.S.; Walter Moxon, M.D.; Campbell De Morgan, F.R.S.; John Whitaker Hulke, F.R.S.; Henry Lee; and Thomas Spencer Wells. Treasurer: Charles Murchison, M.D., F.R.S. Hon. Secretaries: T. Henry Green, M.D.; and William W. Wagstaffe. Council: William Cayley, M.D.; Henry H. Cruckshell, M.B.; Robert Farquharson, M.D.; James Frederick Goodhart, M.D.; Harry Leach; Robert Liveing, M.D.; Philip Henry Pye-Smith, M.D.; Henry G. Sutton, M.B.; John Charles Thorowgood, M.D.; Charles Theodore Williams, M.D.; Henry Arnott; William Morrant Baker; Marcus Beck; Edward Bellamy; Henry Trentham Butlin; Thomas Carr Jackson; Henry Walter Kiallmark; F. Howard Marsh; Henry Power; and William Spencer Watson.

A vote of thanks to the retiring members of the Council was proposed by Mr. C. Brooke, seconded by Mr. De Morgan, and acknowledged by Mr. Fairlie Clarke.

FLOCKS.

WE have received from a Yorkshire flock manufacturer an indignant protest against the accuracy of the statements regarding the preparation and character of "flocks," which appeared in a recent letter to a contemporary, and on which we lately commented. From this it would appear that the description which we quoted of the source of the flocks is strictly accurate. The rags collected are picked by women and girls. From these, materials called "mungo" and "shoddy" are made. "Mungo" is mixed with wool, and "made into cloth and flannel, which are put through a process of cleansing with scouring crystals, urine, soap, &c.,

and then placed over rollers covered with teasles," and afterwards other fibres are cut off with knives. "The fibres which are worked off while going through the cleansing process, those raised by the teasles, and those cut off by the knives, constitute what we call a new flock, which is for the most part as clean as the cloth, the flannel, or the blanket." The other flocks, "called rag flocks, being made from seams of old garments, have a very large amount of cotton threads in them, and small pieces of rags." *"Flocks ought always to be bought in the bulk, and not made up in beds, as the purchaser can then see what is being bought."*

We are glad to learn, on so good an authority, that we were right in our belief that the sweeping condemnation of flocks was not justified. We have received from our correspondent some specimens of his manufacture, which both naked-eye and microscopical examination show to be pure and clean. But the assertion that flocks of a most impure description, not unlikely to spread disease, are in the market, is corroborated by good and independent authority, and receives abundant confirmation from the passage which we have italicised. If further evidence in support of the fact were needed, it is supplied by the recommendation of his manufacture which our correspondent prints on the envelopes in which his samples are sent out, and in which he asserts that his flocks will be found "clean, sweet, and healthy, being chemically cleansed from grease, soap, and other extraneous matters, and at the same time ENTIRELY DEODORISED" (*sic*). The suggested comparison requires no comment from us to increase its significance.

HOSPITALS AND THE PUBLIC.

OF late there has been a disposition on the part of the recipients of charitable medical aid to make public complaint of the treatment they had received at hospitals. This tendency is, we regret, too frequently encouraged, if not altogether engendered, by the mistaken zeal manifested by some members of the lay press in the so-called cause of the public good. It is, however, a remarkable fact that in almost every instance in which a complaint has been published in the daily papers it has transpired that the accusations have either been grossly exaggerated or falsely made. The last case of the kind will serve as an illustration. An influential lay contemporary, evidently without taking the trouble to ascertain the truth of the facts of the case, wrote a few evenings ago as follows:—

"Owing to certain unpleasant revelations that have from time to time of late been made at inquests as to the treatment of patients at London hospitals, these institutions are now viewed with suspicion by many of the poorer classes, whose unfavourable impressions will not be removed by the evidence given at an inquest held on Wednesday on the body of a girl named Ann Bottrich, who died at Guy's Hospital from the effect of an injury she received by slipping on a piece of orange-peel lying on the pavement. The father of the deceased complained bitterly of the treatment his daughter had, as she alleged, received from the night nurse, who, according to her statement, made in the presence of the day nurse, had said, 'I should like to straighten you,' and 'I wish you were dead, stiff, and cold.' The day nurse confirmed the evidence of the father as to the statement of the dying girl; but the night nurse denied that she had made use of the expressions complained of. She had merely said to the patient, 'It would be a mercy if the Almighty would please to take you.'"

On inquiry we have learnt that the nurse in question has, for more than eleven years, been known and trusted as one of the best and kindest nurses at Guy's Hospital. The girl, it appears, suffered from periostitis of the femur and pyæmia; and, considering that the disease would inevitably prove speedily fatal, the prayer of the nurse does not seem very unreasonable. Even if the nurse really did make use of the alleged statements, no sensible person could seriously entertain the thought that a literal meaning should be placed upon them. It ought not to be forgotten that, although the nurses at general hospitals are apparently capable of an almost incredible amount of labour, and are endowed with almost supernatural patience and tenderness, they are nevertheless subject to the weaknesses and caprices incident to our common humanity.

THE DEATH OF CHILDREN WITHOUT MEDICAL ATTENDANCE: MANSLAUGHTER.

THE Peculiar People, and other people equally peculiar, have of late raised the important question whether a man is guilty of manslaughter who neglects to procure medical attendance for his child in a fatal illness. In the case of the Peculiar People the neglect arises from a belief in the efficacy of prayer as a therapeutic agent. The judges, after a period of indecision and unseemly difference, have agreed with Justice Blackburn—as we ventured in June last to say we thought they would agree—to regard this neglect as amounting to manslaughter. Our readers may remember that in November we intimated that the Court for the Consideration of Crown Cases Reserved had affirmed the conviction of John Robert Downes, one of the "Peculiar People," who at the Central Criminal Court was found guilty of manslaughter for having neglected to supply his child, two years old, with medicines and medical aid when it was sick, from the want of which it died. In the light of this decisive judgment we have read with surprise a letter from a correspondent detailing the particulars of a case where a child died with no other attendance than that of a nurse of the veritable Mrs. Gamp style, and no other medicine than syrup of poppies! The medical man—our correspondent—when applied to for a death certificate, very properly refused to give one, and wrote to the registrar, saying that in his opinion further inquiry was necessary. The registrar replied "that the father and midwife attended and gave the information required, and registered the cause of death as *debility and convulsions*." Can anything be more unsatisfactory than this? At the very least the circumstances of the case should have been elicited by a coroner's jury. Instead of this, the parent is accommodated by the registrar with registration as easily as if the most accomplished physician and the most suitable medicine had been provided for the child. Our satisfaction is not restored by the closing paragraph of our correspondent's letter: "Nearly all the women here are attended by midwives, and their infants insured, and it seems most unsatisfactory (as in this case) if they can get a burial certificate in this free and easy manner."

ENTERIC FEVER IN INDIA.

SPEAKING of the causes and prevalence of enteric fever among the European troops in the Bengal Presidency, Sir A. D. Home remarks that the admissions from this disease in 1873 were 143, and the deaths 54; it caused a greater number of deaths than any other single disease during the year, and there is reason to believe that both the admissions and the deaths from it are by no means overstated. The mortality per 1000 cases treated, though still largely exceeding that from the same disease in temperate countries, was somewhat less than in 1872. The first noticeable point in regard to enteric fever is that of its wide diffusion in the Bengal command; admissions are returned from 30 stations and in 39 separate corps. In the report furnished by the medical officer of the 11th Hussars, a table is given showing the months in which the admissions from the disease have

taken place during the nine years the regiment has served in India. In the period there have been 55 admissions, and in no year has the disease been absent, though the regiment has thrice changed its station. Of the admissions, 14 occurred in the month of April and 14 in August; next in respect of frequency of admissions were the months of September and October, in each of which there were 7 admissions; only 2 occurred in June, the month in which the ground water is at its lowest level. No admissions occurred in July or in November in any of the years of the period.

The evidence in the above report, it is urged, of the almost continuous presence of enteric fever year after year in the 11th Hussars is not the only ground for the belief that there are infected regiments as well as infected stations in the command, though it is difficult so to eliminate all sources of fallacy as to demonstrate that the enteric fever, springing up in a station after the arrival of one of these regiments, is due to importation by it.

INSANITY IN THE NAVY.

THE last report from the Royal Naval Lunatic Asylum at Yarmouth, compiled by Deputy Inspector-General William Macleod, M.D., shows that at the beginning of 1874 there were 198 patients in the institution, that 40 were received, 11 discharged, and 20 died; and that at the close of the year there were 207 inmates. Dr. Macleod prescribed the Turkish bath in 24 cases, and considers it a valuable aid "in inducing temporary calm and rest by night without depending entirely on hypnotics." "The restless and destructive were benefited by its use, and it tended to promote the peristaltic action of the intestinal canal." Seven patients were treated with extract of Calabar bean, but with indifferent success. Dr. Macleod again remarks on the marked connexion between syphilis and insanity, and hints that the medical officers who have previously had charge of his patients "would be doing these patients much kindness by giving all the information they can on this head." We think so too.

ROYAL COLLEGE OF SURGEONS.

WE hear that no essay was sent in last Christmas for the Jacksonian prize, the subject of which was "The Use of the Galvano-cautery in the Removal of Morbid Growths." The prizes announced to be awarded by the Council of the College for the present year are the Collegial Triennial, of the value of fifty guineas; and the Jacksonian, the latter being the amount of dividend received from the trust. The subject of the former is "The Radicles of the Lymphatic System in relation to the External and Internal Surfaces of the Body"; and of the latter, "The Treatment of Cancer of the Rectum, particularly as regards the possibility of Curing or Relieving the Patient by Excision of the affected part."

LONGEVITY OF MEDICAL MEN.

THE profession of medicine and the cares of a medical practice cannot be said to be conducive to longevity. The tear and worry incidental to anything like an active pursuit of the calling is far greater than that to which members of the other popular professions—the Church and the Bar—are subject. Nevertheless, we often find gratifying illustrations of how the possessor of a good constitution, who practises sobriety and regularity of living, will overcome all the influences which tend to shorten his life. A notable year for instances of longevity in our own ranks is that which has just passed away. The following physicians and surgeons died during the year, at the ages indicated—viz., James Dawson, F.R.C.S. Eng., 96; Peter Mere Latham, M.D. Oxon., F.R.C.P., Physician Extraordinary to the Queen, 86; R. Stanley Ireland, M.D. Dub., Senior Fellow of the Royal College of Surgeons of England, 96; Arthur Helsham, M.R.C.S. Eng., 90; Sir Charles Locock, Bart., M.D., D.C.L., F.R.S., 77; William Beattie, M.D., F.R.C.P. Lond., 82; George Webster, M.D. and J.P. for Surrey, 79; H. M. Keble, M.D., Staff-Surgeon, R.N., 84; William Hey, F.R.C.S. Eng., of Leeds, 79; James Snow, F.R.C.S. Eng., J.P. for Lincoln, 96; Thomas Paget, F.R.C.S. Eng., of Leicester, 79; Henry Franklin, C.B., F.R.C.S. Eng., Inspector-General of Hospitals, 89; Robert Law, M.D. Dub., 76; John Jobson, M.D. Edin., 85; Andrew Morison, M.D., R.N., 89; William Macdonald, M.D., F.R.S. Edin., 84; Francis Kiernan, F.R.S., F.R.C.S. Eng., 76; H. S. Murley, M.D., 88; Henry S. May, M.D., Army, 86.

THE LATE FEVER EPIDEMIC IN CROYDON.

No fatal case of fever was registered in Croydon during the week ending 1st inst., and but one in each of the two preceding weeks. The epidemic appears, therefore, to have died out, and it will not be without interest to summarise the fatal cases resulting from the two well-defined outbreaks which occurred in the town during the past spring and autumn. In the week ending the 27th of February a death from fever was registered, followed by an almost unbroken weekly series of fatal cases until the middle of July. During the 22 weeks ending 24th of that month 43 deaths were referred to fever. No death from this cause was returned during the following fortnight ending 7th August, after which a long unbroken series of fatal cases again appeared in the weekly returns. During the 20 weeks ending 25th December the deaths from fever in Croydon sub-district, according to the weekly returns of the Registrar-General, were 57 (making 100 in 10 months). The return for the week ending 1st inst. was the first since the beginning of August which showed no fatal cases of fever in Croydon. These figures appear to show that the second outbreak was the more fatal of the two outbreaks, at any rate as regards the killed, who averaged 3 per week against 2 per week during the earlier period.

HOP-PICKERS.

AN important meeting was held last week at Maidstone, at the instance of the Kent Society for the Employment and Improved Lodging of Hop-pickers, in order to discuss certain regulations framed by the Society in accordance with the 314th section of the Public Health Act, 1875. Lord Darnley presided, and the recommendations of the Society were discussed and adopted by the representatives of the local authorities present. These bye-laws make provision for a proper amount of cubic space to be allowed in each hop-house for separation of the sexes, cooking, &c., and also for securing an abundant supply of water; cleansing, disinfection, limewashing, &c., when required, are also provided for. We do not, however, understand whether all the sanitary authorities in the hop-growing districts have subscribed to these bye-laws, and intend to carry out the recommendations in their entirety.

IN that portion of the Report of the Rivers' Pollution Commission, recently issued, which deals with the possibility of rendering polluted water again wholesome, we find the Commissioners enforcing the truism that although, when the sewage of towns or other polluting organic matter is discharged into running water, the suspended matters may be more or less perfectly removed by subsidence and filtration, yet the foul organic matters in solution are very persistent. They oxidise very slowly, and are removed only to a slight extent by sand filtration. Of all the processes which have been proposed for the purification of sewage, or of water

polluted by excrementitious matters, there is not one which is sufficiently effective to warrant the use for dietetic purposes of water which has been so contaminated. Rivers, therefore, which have received sewage, even if that sewage has been purified before its discharge, are not safe sources of potable water.

DR. GEORGE BIRD writes to *The Times* on the subject of health resorts in Egypt. It will be a welcome announcement to many invalids that it is contemplated by the enterprising firm of Messrs. Cook and Son to establish a well-appointed sanatorium just above the first cataract of the Nile. The situation chosen is on the right bank of the river, opposite the island of Philæ, and is picturesque and at the same time accessible. The mean temperature of Egypt during December, January, February, and March, may be said roughly to be about the same as that of England during the summer months. We would ourselves have suggested the site of Thebes as an asylum for European invalids. In addition to its equable climate it would be a hundred and thirty miles or so nearer to Cairo, which is no small consideration.

THE Paris Prefect of Police, having obtained a necessary grant of funds from the municipal authorities of the city, is now taking active measures for the organisation of a night medical service in Paris. At every police station in Paris there will be a list of the medical men of the respective quarter who are willing to make night visits in cases of urgency. The applicant for help can choose a name out of the list; a police agent then accompanies him to the doctor's house, summons the doctor, accompanies him to the patient's residence, and re-accompanies him home. An order for ten francs is then given to the medical man, and it is the police administration which has to get itself paid by the patient. This plan does away with a great many of the evils and objections which rendered medical service at night an onerous and unremunerative work.

AT the last quarterly meeting of the North-Western Association of Medical Officers of Health, held at Manchester, a lengthy paper on the influence of chemical vapours upon health was read by Mr. T. Vacher, medical officer of health for Birkenhead. The Association lately undertook to collect evidence, by means of inquiries addressed to the profession, on this important subject. In all about fifty circulars and copies of questions were issued, and replies were elicited from twenty-six districts in which there were chemical works and factories. As might have been predicted, considerable difference of opinion was found to prevail among the writers of the reports sent in. We shall probably take occasion to deal with this question next week.

THE Bridge Rural Sanitary Authority has originated a memorial to the Local Government Board on the subject of infectious diseases. This memorial, for the object of which they seek the support of other sanitary authorities, asks for power to compel medical men, and the friends and relatives of persons suffering from infectious diseases, to give information to the health authority; householders who neglect to give such information to be subject to a penalty, whilst medical practitioners are to receive a fee for each case reported.

THE Government and City of Paris have decided to share the burden of cost necessary for the rebuilding of the School of Medicine, the Hôpital des Cliniques, and the Ecole Pratique. The expenses are calculated to amount to 5,000,000 francs.

IN London last week 1782 deaths were registered, including 70 from measles, 75 from scarlet fever, 16 from diphtheria, 76 from whooping cough, 20 from different forms of fever, 16 from diarrhœa, and 397 referred to diseases of the respiratory organs. The London Fever Hospital contained 121 patients on Saturday last, 103 of whom were under treatment for scarlet fever, and 11 for enteric fever.

THE *concours*, or examination by public competition, for the appointment of this year's series of house-surgeons to the Paris Hospitals, has just ended. Forty-seven places had to be given, and the *concours* was altogether a brilliant one. Amongst the first ten names on the list are to be noticed, in order of merit, three which have already been rendered famous—viz., Barth, Nélaton, and Robin.

ON Tuesday last, the Duchess of Edinburgh opened a bazaar at the Cottage Hospital, Ashford, Kent, in aid of the funds of the institution. The members of the medical staff were presented to Her Royal Highness on the occasion.

THE *North German Gazette* hints that the German Government will shortly take steps to prevent the sale in Germany of American medical diplomas. These worthless parchments come chiefly from Philadelphia.

REPORT
OF
The Lancet Commission
ON
LUNATIC ASYLUMS.

COLNEY-HATCH ASYLUM.

(*Concluded from page* 32.)

TREATMENT.

IT is difficult to describe—and perhaps impossible to formulate—the treatment of mental disease at Colney Hatch. Probably nowhere is a keener interest evinced in the patients of an asylum, or greater efforts expended on their behalf. The vastness of the institution and the multitude of its inmates are, however, overwhelming obstacles to treatment in the true sense of the term. This condition of matters is the more to be regretted because the pains of the medical superintendents are not adequately requited, and the nature of their work is even misunderstood. The first step in treatment must be to place the patient amid circumstances favourable, and, if possible, contributory, to his recovery. This is impossible at Colney Hatch. If a man or woman is violent, excitable, or dangerous, he or she must be placed in association with other patients similarly affected or disposed. The immediate consequence of this association is, beyond all question, to produce an exacerbation of the disorder. The visible disturbance may not be greatly increased, but the mischief wrought by mental excitement on the mind and mental organism of an insane patient cannot be gauged by the outward indications. In his report for 1872 Mr. Marshall complains that "the health of many of the patients admitted was much impaired from the great mental excitement from which they had been suffering prior to admission." The body suffers much in the prolonged paroxysms of mania and epilepsy; but the mind is the seat of even greater disorder, and it receives permanent injury. We are sure the observant and painstaking superintendent of the female department cannot go round his refractory and more turbulent wards and airing grounds, and watch the alternately seething and

explosive excitement of patients, young and old, without feeling that it is a monstrous evil cases mutually irritating, if not distressing, should be thrown together. No medical practitioner aggregates cases of fever. He knows that the morbid poison derives new strength and energy from concentration. Analogous mischief is wrought by crowding cases of mental turbulence. The inflammatory effects of ill-temper, passion, aversion, and dread, are heightened by the attrition of disordered minds forced into contact. Not only is the difficulty of preserving discipline increased, the operation of mild suasive constraining influences is rendered abortive. Coercion must take the form of physical-force-compulsion, authority enforced by fear, peace preserved by bribes. While visiting the female wards we had unfortunately several opportunities of observing the baneful effects of association in excitement. There was an excess of vehement declamation and quarrelling among the large number of women of all ages, orders and temperaments, huddled together, and we witnessed several personal onslaughts promptly stopped by force, judiciously and kindly applied, but significant of the undesirable system pursued and its injurious consequences. Excitable lunatics will quarrel and fight, but that is a reason for minimising the opportunities of disagreement and occasions of encounter, not multiplying both. It is impossible repeated ebullitions of temper can occur without reflected injury to the brain. Nor is this all. Just as hallucinations of sight become more vivid by dreamy indolence, in which the mind wanders unchecked through its chambers of imagery, hallucinations of hearing gain distinctness and strength by mental listening, and delusions deepen to convictions by repeated assertion, so wilfulness becomes more obstinate by the example and practice of insubordination and defiance. We were concerned to see too many instances in which not only did young women and girls refuse obedience to the reasonable directions of the superintendent, but showed marked defiance, and even used threats. There is always a large element of wantonness in the intractability of insane patients, and it is a circumstance of exceeding gravity when this cannot be held in salutary check by suasive authority. Moral measures of control are manifestly of small avail in many of the wards at Colney Hatch. It would be as easy to tame a wild horse in the midst of his herd as to control an insane virago by kind sternness under the conditions that exist and the surroundings created by the system extant at this asylum. The majority of the inmates, regarded *individually*, are, however, plainly amenable to moral treatment. Even the parties in the attempted fights we witnessed were coherent in their rage, and gave plausible reasons for their animosity when passion was partially appeased. The medical superintendent has clearly a task of exceptional difficulty to preserve the moral quiet so essential to the restoration of disordered minds. It is fortunate that some of his more hopeful cases can be removed, when convalescence approaches, to a small detached building, which has been wisely provided for use as a hospital in time of epidemic disease. A multiplication of such separate blocks would be a work of real economy and prudence. The men are generally more tractable than the women in this as in other asylums, and the wards under Dr. Sheppard's care generally exhibited less evidence of excitement; but in these the mischievous results of crowding similar cases was, not less clearly, though differently, apparent. The stolid faces of advanced paralytic, epileptic, and melancholic patients everywhere reflect the depressing effects of the surrounding despondency; and, what is worse, they absorb more of the morbific gloom than they reflect.

Having said thus much of what we consider to be the initial mistake of aggregating cases in large wards, it is obvious we cannot attach great value to the treatment of mental disease by moral remedies as carried out at Colney Hatch. We have observed that the intention is praiseworthy if the effort fails in fulfilment. We would not on any account be supposed to echo the complaint which Dr. Sheppard in his report for 1869 stigmatised as a misrepresentation—namely, that the medical policy at this asylum was "making no progress," and that the medical superintendents were "not versed in the humanitarian treatment of disease." Nothing, so far as we have been able to form an opinion, can well be farther from the truth. The medical superintendents are doing their utmost, but the conditions in which they labour must be fatal to the best and most intelligent endeavours. Give the same gentlemen half or a third the number of patients, place them in a suitable building, let them select their own agents and appliances, and leave them undisturbed, and we believe the issue would be a treatment of mental disease humane, scientific, and successful, neither of which the treatment at Colney-Hatch Asylum can be under existing circumstances. We say this advisedly, notwithstanding the proportion per cent. of "recoveries" shown in the table appended to the section on "Results." The figures upon which this proportion is calculated are arrived at by a process so untrustworthy that, as explained in the foot-note, we cannot attach any great importance to the estimated result. The curability of cases is in great part inferred from the fact of their having been cured, a manifestly inaccurate process, but the only one open to us. The most satisfactory element of the treatment is that which relates to the physical phases of the malady. Dr. Sheppard has, as already stated, introduced the Turkish bath, and it is found to produce the best effects. It promotes the action of the skin, always much disturbed in nervous disease, it soothes, and it induces sleep. The bath might with advantage be enlarged at this asylum, and its value should surely be recognised and its powerful aid secured at other institutions. Dr. Macleod has just reported warmly of the service it has done at the Naval Lunatic Asylum. The general health of the patients is well cared for, and all due precautions are taken against the introduction or spread of infectious disease. Care is also exercised in the use of narcotics. The prejudicial effects of opium, too commonly employed in cases of puerperal, and some of the other forms of mania, are borne in mind, and the recourse to sedatives and narcotics is limited. The shower-bath is, we are assured, used only as a physical remedy, not as a punishment. A considerable amount of liberty is allowed to convalescent patients, many being permitted to visit their friends in charge of an attendant. The results of this humane practice are entirely satisfactory.

We now come to what, notwithstanding the well-considered and carefully expressed opinion of Dr. Sheppard, we must continue to regard as a very fair test of the point to which the moral treatment of insanity has risen in an asylum—the recourse to "restraint" and "seclusion." In his report for 1873, the medical superintendent of the male department complains of the "dicta of those who are too prone to guage the excellence of an asylum's management by the paucity of its 'restraint.'" We can readily believe that too much stress may sometimes be laid upon the non-recourse to mechanical coercion. In a report of the Quebec Lunatic Asylum, Lower Canada, which lies before us, we find the following stricture on the practice rapidly becoming national on this side of the Atlantic:—"The English system of non-restraint (superintendence and repression by keepers, isolation in cells) is only a system of physical restraint in disguise." We do not desire to challenge the justice of this criticism; we only say, if it be correct, the reform is not so honestly carried out as we have supposed it to be. Dr. Sheppard contends that there are cases where it is not only merciful, but agreeable to the patient, to apply restraint judiciously. He approves of the use of gloves and other appliances—carefully and considerately applied and jealously watched. The practice is, however, very seldom adopted and almost unknown in late years, except in surgical cases, where there can be no question as to its expediency. "Seclusion" is more extensively used, but even in this respect there is a marked improvement. The following statement is culled from the Reports of the Commissioners of Lunacy. There was some deficiency in the information for certain years, kindly supplied to us at the asylum, and we have thought it better to reproduce the figures returned to the Commissioners. Although these do not fit in with the yearly record in point of date, the general result is the same, and the totals of the ten years, whichever way we take them, must of course be identical. The use of this remedy will be seen, as might

have been expected, to be less frequent on the side of the males than on that of the females. We have not thought it desirable to take cognisance of the difference of sex in our general statistics, because we are dealing only with numbers in the aggregate. What we shall have to remark on the disparity of conditions and results in the case of the two sexes will come most fittingly at the close of these reports, when we are able to discuss the general stock of information collected.

	Males.		Females.	
	Cases.	Instances.	Cases.	Instances.
1865—from Aug. '64 to Aug. '65...	107	337	164	970
1866—from Aug. '65 to Nov. '66...	105	281	218	937
1867—from Nov. '66 to Nov. '67...	72	158	169	822
1868—from Nov. '67 to Oct. '68 ...	73	110	165	834
1869—from Oct. '68 to Aug. '69 ...	—	104	—	780
1870—from Aug. '69 to July '70...	25	36	148	624
1871—from July '70 to Oct. '71 ...	37	42	148	559
1872—from Oct. '71 to June '72 ...	34	64	96	261
1873—from June '72 to May '73 ...	23	35	134	351
1874—from May '73 to May '74 ...	14	20	137	380
	490	1237	1379	6518

Total for the ten years from 1865 to 1874 ... ... } Persons. 1869 ... Instances. 7635

It is only fair to state that Dr. Sheppard is no empirical advocate for "seclusion." In the Asylum Reports for the last ten years we find many statements of his views unfortunately opposed to expressions of opinion by the Commissioners. Dr. Sheppard believes that the violence of the crusade against "restraint" and "seclusion" is of a piece with the fashionable revolt against bloodletting, and he affirms that all these headlong tilts against particular modes of practice are liable to be carried to the opposite extreme. He is of opinion that there are cases in which to relieve a patient ruthlessly intolerant of clothes from the irritation of clothing, to restrain a patient violently or viciously mischievous and destructive, to remove the stimulus of light and noise from a patient preternaturally irritable, or to exert the moral influence of separation from his fellows and confinement for a suitable period on a wilful insubordinate, may be not only expedient but humane. He cites instances of patients who have acknowledged the value of these various methods of treatment, and expressed thankfulness for their employment. Some have even dated their recovery from the exhibition of one of these popularly condemned and stigmatised methods of treating turbulent lunatics. We reserve our own rejoinder to these propositions, but it is right they should be stated, and that it should be distinctly understood how completely the plan of treatment pursued at Colney Hatch is supported by arguments claiming fair consideration, however much we may differ from the conclusions to which they are intended to direct the judgment of the reader. Of the concerts, readings, recitations, and the like, freely provided at Colney Hatch, Dr. Sheppard, in his latest report, remarks that they are "essentially curative to many and absolutely consolatory to all, and therefore, as it seems to me, necessary." This opinion of the great practical value of entertainments is almost unanimous in asylums. We are glad to find the "remedy," for such it really is, in full use here. If it were only possible to substitute for the classifications at Colney Hatch a system of dealing directly with individual cases, the "treatment" would be entitled to high rank and confidence, and leave little to be desired.

RESULTS.

We have anticipated much of what might have been placed in this section in the earlier stages of the Report. The figures in the following table must be qualified by the remarks already offered, and the intimations by note below. The proportion of "curable" cases to the total of admissions appears to be 33·54 on the aggregate of the ten years. The proportion of cures to curable cases, upon the *estimated* figures, is 63·93, but it must be borne in mind how these figures have been obtained. The percentage of deaths on average numbers resident is not high; general paralysis accounts for 512 out of the 1960 recorded for the ten years, or 26·12 per cent. The average proportion per cent. of deaths on admissions is 41·64. The average proportion per cent. of "recoveries" on admissions is 33·46.

Middlesex County Lunatic Asylum at Colney Hatch.

Year.	Cases admitted.				Cases discharged.				Cases remaining on Dec. 31st.		Average number resident.	Analysis of recoveries.				Analysis of deaths.					Casualties reported.
	Total number.	Transferred from other asylums.	Readmitted.	Deemed curable.*	Recovered.	Relieved.	Not improved.	Died.	Total number.	Deemed curable.		Proportion per cent. on admissions.	Proportion per cent. on cases deemed curable.†	Proportion per cent. on average number resident.	Number, within six months of admission.	Proportion per cent. on admissions.	Proportion per cent. on average number resident.	Immediate cause: General Paralysis.	Average age at death.‡	Number, within six months of admission.	By suicide or accident.	
1865	440	...	40	137	127	33	6	198	2023	78	2010	28·86	61·95	6·31	64	45·00	9·85	73	44·99	69	...	3
1866	342	...	20	107	114	23	6	189	2036	71	2028	33·33	61·62	5·62	54	55·26	9·31	58	45·47	60	1	6
1867	306	...	18	96	105	25	3	174	2035	63	2036	34·31	62·87	5·15	52	56·86	8·59	34	46·66	47	1	3
1868	381	...	23	126	127	54	...	190	2045	61	2052	33·33	67·55	6·18	82	49·86	9·25	52	44·81	52	1	4
1869	383	...	20	147	140	31	2	202	2053	68	2058	36·55	67·30	6·80	91	53·74	9·81	51	45·07	58	1	4
1870	462	83	39	170	135	282	1	187	1910	108	2048	29·22	56·72	6·59	79	40·30	9·13	38	46·06	50	1	2
1871	875	136	58	267	218	278	...	219	2070	153	1990	24·91	58·91	10·95	135	23·86	11·00	50	47·57	99	1	5
1872	569	66	44	257	241	170	2	179	2047	168	2056	42·35	58·92	11·72	128	31·45	8·70	50	47·56	51	3	5
1873	673	47	55	160	220	245	1	195	2059	108	2060	32·68	67·67	10·67	130	28·97	9·46	47	45·92	77	2	7
1874	706	61	69	256	276	173	...	227	2099	88	2086	39·09	75·82	13·20	148	32·15	10·88	59	46·43	92	...	4
...	5137	...	393	1723	1703	1314	21	1960	...	...	2042	33·46	63·93	8·31	963	41·64	...	512	...	655	11	43

* The figures in this column have been obtained by adding the number of "recoveries" in a year to the number of "cases deemed curable" returned to the Commissioners of Lunacy as remaining at the close of the year to be carried over to the next, and then deducting those left over from the previous year; e.g., in 1865, 127 cases were discharged "recovered," and at the close of the same year 78 cases "deemed curable" remained to be carried over to 1866 (127+78=205). The "cases deemed curable" left over from 1864 to Jan. 1st, 1865, were 68 (205−68=137, which appears in the 5th column). This computation may be approximately accurate, but not absolutely, because some "curable" cases have probably died from accidental physical disease, &c.

† This percentage is upon the number of cases "deemed curable" among those remaining on Dec. 31st of the previous year (11th column), and of cases "deemed curable" among those admitted during the current year (5th column).

‡ The average age has been computed by crediting each deceased person entered as "from 15 to 20 years," or "from 20 to 30 years," with the mean age; e.g., 12 deaths at "from 15 to 20 years" have been reckoned as 12 at 17½ years.

We have to thank Dr. Edgar Sheppard and Mr. William Gurslave Marshall for great frankness and attention in the course of prolonged visits and inquiries.

BEQUESTS, &c., TO MEDICAL CHARITIES. — The Worcester Infirmary has received £5000 under the will of Miss Garmston. Mr. John James Rowe bequeathed £1000 to the Liverpool Medical Mission Society. The Sussex County Hospital, Brighton, has received £899 under the will of Mr. P. Head.

DR. RICHARDSON'S LECTURES ON INDUSTRIAL PATHOLOGY.

II.

IN his second lecture on Industrial Pathology, delivered before the Society of Arts on Friday, the 17th ult., Dr. Richardson commenced to speak on the various agencies that are at work in producing physical injury on the body during the performance of industrial labour—injury, that is to say, which may be fairly attributed to the labour itself, irrespectively of any of those disturbing influences which have already been brought under notice. From the large mass of material which lay at his command and which he had collected, of which he could, he said, extract only a small part for the present course, he drew a condensed classification of the causes of injury from industrial pursuits. The classification was included under eight heads, with their subdivisions or orders, as follows:—

CLASS 1.—Injuries from inhalation of foreign substances by the lungs. (*a*) Of fine particles of solid matters; dusts. (*b*) Of gases and vapours.

CLASS 2.—Injuries from exposure of the body to chemical agents.

CLASS 3.—Mechanical injuries from impact of foreign bodies and from burns and scalds.

CLASS 4.—Physical injuries of the body from—(*a*) Unnatural positions of body. (*b*) Bearing heavy weights and loads. (*c*) Undue atmospheric pressure. (*d*) Mechanical concussions.

CLASS 5.—Injuries from exposure to damp and impure air.

CLASS 6.—Injury from contact with parasitic organic forms.

CLASS 7.—Injuries from excess of muscular work; (*a*) local; (*b*) general.

CLASS 8.—Injuries from exposure to extreme variations of temperature.

From this classification as a basis the lecturer passed to details of injuries under each class, following in every case, as he proceeded, the plan of noting the particular form of injury or disease which is induced by the calling or art. Thus, he said, the pathology would be naturally evolved out of the industry, and a complete schedule or catalogue of diseases induced by industrial work would be obtained.

Injuries under the first class.—The persons who sustain injuries from inhalation of dust by the lungs are a numerous body of industrial workers, and the degree of mischief inflicted is extremely serious. Three sources of provision against injury are naturally provided, and under ordinary circumstances are effective, but they are insufficient against the extreme risks incident to labour. The protective plans are spasmodic closure of the windpipe and cough when foreign substances enter the air-passages, profuse bronchial secretion under the same circumstances, and ciliary motion.

The physiology of cough, of secretion, and of ciliary motion having been briefly explained, the lecturer stated that the greatest differences prevail in respect to the nature and extent of the danger following upon the inhalation of solid particles of matter or dusts. These differences are dependent upon the character of the dusts; in other words, the character of the dust determines the mode as well as the severity of the injury. This is so true that, other things being equal, we may predict the fate of the workers by the nature of their work when they carry it on without efficient protection from danger.

This observation led the lecturer to divide the various kinds of dusts into what he called cutting dusts—that is to say, dusts the fine particles of which present sharp cutting edges; simple, irritating dusts; dusts containing organic matter; dusts composed of soluble saline material; poisonous dusts; and obstructive and irritating dusts.

The cutting dusts include steel dust, hard stone dust, sand and glass, and dust of pearl. These particles are extremely minutely divided, are insoluble, are pointed or edged, and exceedingly penetrating. Drawn into the extreme divisions of the bronchial passages, these cutting dusts divide the ciliary layer, divide even the epithelial basement, and actually gain entrance into the vesicular structure of the lung itself. From these causes the injury they inflict is as rapid as it is terrible. Hence, the rapidity of the fatal mischief in the knife-grinder, the stone-cutter, and the sandpaper-maker. The symptoms induced are technically called symptoms of pulmonary consumption. They are like the ordinary symptoms of that disease, and are indeed practically the same, except that the foreign irritant which calls them forth is an inorganic particle as distinguished from the organic tubercle of the natural affection. Various illustrations of this form of pulmonary consumption were supplied; the most striking, perhaps, being some examples of the induced disease from inhalation of finely powdered glass and sand during the process of sandpaper manufacture. Thus, the first disease that appeared on the calendar of diseases from industry was pulmonary consumption.

Under the head of simple irritant dusts were included dust of wood; dust of textile fabrics, such as fluff of silk, wool, cotton, flax, and hemp; and the dust from corn, consisting, to a considerable extent, of particles of the husks of corn. All these dusts, with one exception, the fluff of wool, create great bronchial irritation, cough, and profuse secretion. The fluff or dust of wool is exceptional, workers in wool being an exceedingly healthy class, and largely exempted from pulmonary disease as a result of their occupation. The fluff of silk appears also to be comparatively free from irritating properties when it is quite pure and white. But this is not the case when the silk is dyed, and persons engaged in trimming manufactories where dyed silks are used are subjected to irritation and cough during their work. A striking instance was given in illustration of this fact in the case of a young woman who was assumed to be spitting blood, and who, under this assumption, was brought under the observation of the lecturer. A microscopical examination of the coloured expectorated matter demonstrated the presence of silk fibre. It was possible, and, indeed, probable, that the source of irritation in these dyed silks is the dyed stuffs rather than the fibre.

Cotton-fluff is a cause of irritation, but it is less so than the dust of hemp and flax. Of the effects of dusts from hemp and flax the lecturer gave a very careful description, defining the differences of symptom from Neapolitan, Russian, and Polish hemp and flax. These dusts invariably create an intense irritation, copious secretion, and, in fact, a form of chronic bronchitis. Thus a second disease was added to the list. A special and further evil occurs sometimes from the use of Neapolitan hemp. In the dust of the Neapolitan hemp there is distributed a peculiar odorous substance, smelling not unlike new hay, and derived probably from the admixture of a grass or seed. This causes, when it is inhaled, shortness of breath, constriction of the throat and spasmodic cough, in recurring paroxysms which continue for a long time after the inhalation has ceased. The lecturer had obtained Neapolitan hemp charged with this dust, and after shaking it in a large dry bottle he found, on inhaling the dust, that the spasmodic symptoms were immediately brought on. They resembled more closely the symptoms known as hay-fever than any other malady, and might be added to the calendar of industrial diseases under this name. The dust from flax-dressing, which is indeed but a continuation of the hemp process on a finer material, is equally irritating.

Dwelling for a moment on a matter of history, Dr. Richardson pointed out that these effects from the inhaling of flax and hemp dust had been observed and commented on by some of the earliest writers. Ramizini, in his work "De Morbis Artificum," had very faithfully described the flax disease as far back as the year 1717.

Workers among rags were incidentally noticed in connexion with inhalation of dust, and the researches of Dr. Jardine Murray on this subject were detailed. It appears that these workers suffer from dust in the same manner, though in a lesser degree, than the flax-workers, while they escape with singular impunity from the contagion of the communicable diseases to which, *a priori*, it might be considered that they were constantly exposed.

The dust arising from hair was also noticed in this division of the subject, and a new observation made by Dr. Cholmeley was commented on as of considerable importance. It is that men who are engaged in brushing hair by machinery are subject to special danger from the fine particles of hair which are carried by the brush, during its

rapid revolution, into the face of the worker. These particles are borne into the lungs, and induce a bronchial irritation and cough which partake of the character of a bronchial phthisis. Dr. Cholmeley has known three persons who have been obliged to leave their occupation from this cause.

Wig-makers, hair-cleaners, and other workers are affected in a similar manner, and the unhealthiness of the occupation is very definitely shown by the rate of mortality of the workers, which, from the age of twenty-five onwards, is greatly above the average.

Dusts containing organic vegetable matter in considerable quantities lead to other mischiefs than irritation. The dust arising from tobacco-leaf during the process of making cigars is excessively injurious unless the most perfect ventilation be secured. The symptoms induced are oppression of breathing, dryness of the throat, and in young hands giddiness and nausea.

The dust produced from the various processes of snuff-making is more injurious still. The tobacco leaf, finely divided, is moistened with lime-water and mixed with salt, sometimes even with floor-dust sweepings, and in yellow snuff with red lead. During the drying of this mixture, and while it is being turned over in the drying, there arises with the dust a smoke which so affects the younger workmen that they become faint and vomit until they are rendered tolerant of the poisonous matter they inhale. In the further process of sifting the snuff,—after it has been ground preparatory to adding "liquor," namely, salt and water to give weight, and scents to give perfume,—the air is charged again with dust, which produces the same symptoms as those above described. Thus organic nervous disturbance is another evil added to the table of disease.

The dusts of certain soluble saline substances give rise to great bronchial irritation. The dust of sulphate of iron used in fur-dyeing is one of these substances. This dust also acts upon the teeth, destroying the enamel, and adding caries of the teeth as an additional malady of industrial origin. It was but fair to add that improvements in the processes in which this salt is used have led to the removal of dangers which at one time were general.

The poisonous dusts are mainly those in which the salts of arsenic are diffused in fine division. In the colouring of artificial flowers, in some branches of paper-staining, and in some cases where arsenic has been used for preserving purposes, as in the preservation of the skins and furs of dead animals, the dust of arsenical compounds is distributed and inhaled. The arsenical salt, mixing with the secretions of the mouth and throat, is swallowed in some instances, and excites irritation of the stomach and other symptoms of arsenical poisoning. In one of these examples Dr. Richardson saw the gastric mischief assume a gastro-enteric type. In all instances there is a continuous dyspepsia so long as the source of the evil is present. Gastric irritation and acute dyspepsia form, therefore, two further additions in the train of industrial pathology.

The dusts which are obstructive as well as irritating are principally those of flour, dried or partially dried clay, lime-dust, fine dust of carbon, coal-dust, carbon scrapings, and rouge. Workmen employed in flour-mills, in earthenware manufactories, in mining, in loading and unloading coal, in walking-stick making, in jewellers' work and other burnishing trades, are subjected to one or other of these varieties of dust. All the dusts cause irritation of the bronchial passages, but some also produce direct obstruction to the free passage of air through the minute ramifications of the bronchial tubes into the air vesicles. Thus an irregular pressure of the inspired air is brought about, an undue pressure is exercised upon a portion of the lung structure, there is rupture of vesicles and production of what is technically called emphysema. The symptoms attendant on this condition are those of suffocative breathing and spasmodic cough, ordinarily designated asthma. In "miller's asthma" this condition is most destructive. With the emphysema there is always bronchial irritation and chronic bronchitis, superadded in a greater or lesser degree of intensity. In coal-miners the distribution of carbon-dust through the lungs is so extensive that the organs sometimes assume the colour of coal, and a condition of disease like to what is known as melanosis is induced. Thus three other forms of disease are added to the schedule of industrial maladies.

After narrating various other facts connected with dust Dr. Richardson moved to the second subdivision or order of the class of injuries from inhalation of foreign substances by the lungs—namely, from the inhalation of vapours and gases. These agents he placed forward in series—viz., gases of carbonic oxide, sulphurous acid, hydrochloric acid, and chlorine; vapours of nitric acid, of ammonia, of turpentine, of bisulphide of carbon, of aniline, and of nitro-benzine; fumes from heated resin; metallic fumes, such as those rising in smelting metals, and in founding, such as the fumes of mercury, copper, and zinc.

In various occupations the presence of carbonic oxide in the atmosphere surrounding the worker is a source of danger, and some typical illustrations of this fact were supplied. The gas, invisible and inodorous, and evolved freely during the apparently simple operation of burning coke or charcoal in a chafing-dish, is frequently inhaled in close rooms, its presence being unrecognised as a source of the symptoms it excites. In cold weather women working at the lace-frame are often led to place a chafing-dish of burning coke beneath the frame, and directly under their own nostrils, the object sought being that of keeping the hands warm for the performance of the work, which requires delicacy and precision of hand movement. In this way the women are made to breathe an atmosphere charged with carbonic oxide and carbonic acid from which they suffer severely. The acute symptoms are headache, giddiness, nausea, faintness, flushing of the face, and irregular action of the heart. The chronic symptoms are failure of appetite, fœtor of breath, a nervous, hysterical condition, and anæmia, with great depression of muscular power. Men are not, more than women, exempt from these effects of carbonic oxide. Dr. Richardson had under his observation a brazier who was affected dangerously from this same cause. The man, who worked in a small, close shop, was accustomed to use an open chafing dish of heated charcoal for keeping his irons hot after they had been raised to redness in the fire of the forge. In him the symptoms induced were those of vertigo, and they remained even for a long time after he was removed from the influence of the gas. In the course of the description of the above-named facts, the lecturer related some experimental inquiries which he had made with carbonic oxide, from which it was shown that the inhalation of this gas in free quantities will induce a temporary diabetes. It had not as yet been ascertained whether diabetes had been excited by this means in those who work in an atmosphere containing carbonic oxide; but it had been observed, in corroboration of the experimental evidence, that some men exposed by accident to the gas were diabetic for a period after their recovery from the narcotic and from other immediately dangerous conditions into which they had been cast.

The action of sulphurous acid gas was next brought under consideration. This gas is used largely for bleaching purposes; as, for instance, for bleaching plaited straw, and even for bleaching corn. Two classes of industrials suffer; they who are occupied in the process of bleaching, and they who are exposed to the bleached products before the gas has entirely escaped; men who unload bleached oats for example, such as fellowship porters and the like. The symptoms caused by the inhalation of sulphurous acid are acute and chronic. The acute symptoms are those of difficult breathing and suffocative cough; these are temporary in character, and are less hurtful than might be expected from their frequent severity. The chronic symptoms, produced by long exposure, are feebleness of body, undue fluidity of the blood, biliousness amounting even to jaundice, and anæmia.

PROFESSOR SANDERSON ON THE PROCESS OF INFLAMMATION.

LECTURE I.—PART II.

THERE is a doctrine which has woven itself into the pathological teaching of the last thirty years, based, indeed, on Hunter's, but opposed to his observation—viz., that of increased action on the part of the tissues—a doctrine which is really quite as groundless as that of Hunter. The doctrine of increased attraction implies and takes for granted that there is another force in addition to that of

the heart concerned in the circulation in the capillaries. This "capillary force" has become historical; it was thirty years ago taught in its entirety by Alison. The physiological facts upon which it is based are not easy to grasp. It has no basis in experiment, and doubtless there is no theory for which physiological support may not be found if the upholder persisted in not seeing the *contra*, but regarded only the *pro*. It was said, among other things, that the capillary circulation in frogs goes on after death, and that it could only do so by reason of "capillary attraction." But it is now well known that this fact is due to the arteries after death continuing to undergo rhythmical dilatation and contraction. So also another fact observed in the living animal—viz., irregularity in the flow of blood—is due to the same rhythmical action of the arteries, as may be well seen in the ear of the rabbit. Again, it was said that without capillary attraction it would be impossible for arteries to empty themselves after death. But the artery empties itself by virtue of its own contraction. Asphyxia used to be said to be due to stagnation in the pulmonary capillaries, which no longer originate *vis viva*, and so cannot empty themselves. But every physiologist knows that in asphyxia the left heart is invariably full of blood, which would be inconsistent with pulmonary obstruction. The experiments of John Reid were made to do service in the same cause. They showed that in asphyxia the arterial pressure was increased—an increase attributed to the destruction of capillary power. Most of these facts were explained by the discovery of the vaso-motor system of nerves (by Brown-Séquard), by which it followed that the distribution of blood in an organ depended upon such nerves. In pathology, however, the doctrine still held ground, and came greatly into favour when, between 1850 and 1860, the microscope was holding sway. So great an influence had the microscope gained, that it was stated in Edinburgh that the cellular products of inflammation, of tubercle, and of cancer, could be differentiated by its means, and in London there was published a work entitled "The Principles of the Cure of Disease as shown by the Microscope." At this time, too, the changes due to inflammation in extra-vascular tissues had been recently described—viz., in cartilage by Goodsir and Redfern, and in the cornea by His. Finally, Virchow, basing his observations on inflammatory changes in bone, muscle, &c., described apparent regions of increased action of the tissue, and built thereon his well-known "cellular theory." Virchow's docrine is that there occur local disturbances of nutrition, extending from masses of tissue or centres, and in 1854 he first gave his reasons for adopting this view in preference to that of Hunter. The best exposition of this doctrine—better, indeed, than that given by Virchow himself—is given by Mr. Simon in his Essay on Inflammation in "Holmes's System of Surgery," first edition, 1860. He says:—"A part does not inflame because it receives more blood; it receives more blood because it is inflamed. 'Action,' says John Hunter, 'creates the necessity for support, and supplies it.' How this is effected need not now be discussed. Simply let it be recognised that with the greater necessities of a part all required blood-supply comes to it, and that the enlargement of bloodvessels which permits this afflux is due not to any mechanism acting *a tergo*, but to an influence primarily exerted by the part." He then proceeds to illustrate this distinction by contrasting two cases, in the one of which the femoral artery has been obliterated for aneurism, and in the other in which amputation of the thigh has been performed. "In both cases the main artery is obliterated, and at about the same spot; in both cases the pressure of the heart's action is the same; but in one case there remains no requirement for blood below the place of ligature, and accordingly the collateral bloodvessels undergo no enlargement; whereas, in the other case, the entire remaining limb requires its customary supply of blood, and the collateral bloodvessels accordingly enlarge so amply that not an hour's anæmia is inflicted on it.....What is it then in these cases that opens a way for collateral circulation?.....Evidently not increased pressure by the heart, but diminished resistance by the artery." Indeed, the immediate effect of a ligature is to diminish the pressure in the vessel beyond the seat of constriction, so that the blood passes under an increased pressure through the collaterals, and with increased velocity,—the rate at which blood flows along an artery depending on the difference in pressure at different parts. Applied to that view of inflammation now under consideration, it might be stated thus,—that the flow through the collaterals is the result of increased attraction by the tissues; or, in the words of Dr. Alison: "It is highly probable that the primary and fundamental change is not in the vessel itself, but between this and the vital changes in the tissues." It was only towards the end of his life that Alison became aware of Goodsir's researches, and had he lived to see the acceptance of the "cellular pathology," he would have hailed it as further proof of the truth of his cherished *vis a fronte*.

Accordingly Virchow and his followers believe that tissue overgrowth is the constant and central fact of inflammation. Mr. Simon, in his description of the microscopic characters of an inflamed part, dwells upon the textural changes at the margin of the focus of inflammation, and points out their derivation from the multiplication of textural elements and their final destination in pus. According to him the tissue is excited and attracts or draws blood to itself. The state of physiology at the present day is very different from what it was twenty-five years ago, when Alison taught. Now, by more exact observation and experiment, it has become impossible for us to hold the doctrine that the heart is inadequate to carry on the circulation. Alison's influence was great, but his mode of teaching was not the one calculated to keep the mind open for the reception of new facts. He always set forth his conclusion first, and then explained the facts on which it was based,—a method bad for the student of nature to pursue, but even worse for the physiologist; for in that way it was easy to fit facts to theories. At the present day the physiologist takes a different stand. The worst accusation that can be made against him is that he has no view at all. But the theories of the past must be demolished; such words as "irritation" must be got rid of—words which in their original meaning assume a property of irritability, and we must substitute for it the phrase "injury of tissue." And with regard to many questions it is far better to leave the mind open rather than set up some favourite theory. In pathology our knowledge is still too imperfect not to need the rational and scientific use of the imagination. It is better then not to commit ourselves to views, baseless in fact, and purely theoretical, which we may live to see rejected as untrue.

SIR WILLIAM HARCOURT ON THE HEALTH OF OXFORD.

ON Monday night, at the Druids' dinner at Oxford, Sir W. Harcourt, M.P., spoke at considerable length on the sanitary condition of the city of Oxford. Sir William Harcourt condemned severely the action of Mr. Cave in bringing forward last session in Parliament a motion imputing to the authorities wilful and culpable neglect of the sanitary condition of the town. This motion was ultimately withdrawn in order that Mr. Cave might obtain additional evidence sufficient to support it. Sir William Harcourt urged, however, that this evidence ought to have been in Mr. Cave's possession before the motion was put down. Sir W. Harcourt alluded to the energy with which the extensive system of drainage was being carried out, and the satisfactory nature of the scheme. He denied that Oxford was, or is now, an unhealthy city, and he based his assertion on the Registrar-General's returns for 1872, which assigned to Oxford a death-rate of 19·3 from all diseases, and from those of the zymotic class 2·5. In 1873 he admitted that the rate rose to 21·9. In 1874 the total number of deaths was 713, to an estimated population of 33,000; but deducting the deaths of persons brought from the country to the infirmary, the number must be reduced to 691, yielding a death-rate of 20·5. These figures, he concluded, were sufficient to refute the charge that Oxford was an exceptionally unhealthy place, or that the authorities had neglected their duty. We

venture to think that Sir William Harcourt's statement would have been more convincing and conclusive had it not such an air of special pleading, and had he not ignored the main facts of the indictment. We cannot allow that even the lowest death-rate, 19·3 of 1872, is satisfactory evidence of the health of the city. Considering that a large proportion of the inhabitants live under exceptionally favourable circumstances as regards food, house accommodation, and occupation, and also that there are residing in the University more than a thousand young men leading active and healthy lives, the death-rate among whom can scarcely amount to 7 per 1000, we think that a death-rate of 19·3 is far too high, and the normal rate should certainly not exceed 16 or 17. Sir W. Harcourt gives us the death-rate for the whole year 1874, but omits all mention of the last quarter of that year. During that time matters had assumed a serious aspect at Oxford: deaths had occurred from puerperal fever, erysipelas attacked a considerable number of inmates in the infirmary and was prevalent in the town, some undergraduates died of typhoid fever at the colleges, and Prince Leopold also contracted the same disease during his residence at the University. Sir William Harcourt touched but lightly on the question of the water-supply, though we are glad to learn that the city is to be provided with a supply of pure water drawn from reservoirs not so liable to contamination as those at present situate at Hincksey,—still, this promise for the future by no means condones the wilful neglect which has permitted the present water-supply, originally good, to become exposed to all the filth and contamination of the Hincksey suburb. Sir William Harcourt evidently lays great stress on the low annual death-rate from zymotic disease, as indicating a fairly healthy condition. We have frequently shown, however, that this cannot be depended on. Zymotic disease may be exceptionally high in one quarter of the year, and exceptionally low in the others; or, again, one portion of the town may be visited severely and the other parts escape, the freedom of one compensating for the increase in the other.

At the time Mr. Cave brought forward his motion we declared it to be ill-advised and far too sweeping, and wanting in discrimination of the points most calling for reform. We heartily join in the commendation bestowed by Sir Wm. Harcourt on the local board for the perseverance, resolution, and energy with which they have planned and carried on the extensive drainage scheme. Still much remains to be done before Oxford can be made a truly healthy city, and we hope the authorities will not be beguiled into a fool's paradise of security by the flattering picture their Member has drawn for them. For, if Sir W. Harcourt's speech is to be taken literally, it implies that before the present improvements were undertaken, the health of Oxford was so good as really not to need them. If, therefore, he underrates the dangers which beset Oxford in the past, we fear he is likely to overvalue the benefits of the present improvements.

Correspondence.

"Audi alteram partem."

THE LATE MR. JAMES HINTON.

To the Editor of THE LANCET.

SIR,—I am prompted to take up my pen, and offer a slight tribute to the memory of that most remarkable man, my late colleague, James Hinton, inasmuch as it has surprised me to meet with persons who have not known him other than as an aural surgeon, and have not connected him with the authorship of some well-known philosophic works. When I say he was one of the most remarkable men in our profession, I feel astonished that he was ever in it; but being *in* it, he was not *of* it. I believe accident alone must have made him a medical student, just as a kind of chance gave him his specialty. Of all the mistakes (as he often told me) which people made about him, the greatest of all was that of regarding him as an "eminent doctor." It was certainly not his *forte* to deal with his fellow-creatures, and treat their various ailments in a common-place way, any more than it was his inclination to devote himself to medicine with a purely scientific spirit. So far from his being able to pursue a special department of science in the chemical or physiological laboratory, I believe he was totally unfitted for such work. It was the ideal, speculative, philosophic, and metaphysical which occupied his mind. Whatever chance it might have been which led him to his professional specialty, he could not but bring a great force of intellect to bear upon it, and it necessarily grew in his hands; but he nevertheless did not like it, for once, when twitting him upon his numerous patients and large fees, he said the harder he worked the sooner he should gain his freedom.

And yet, I think, it is well that now and then such men should find themselves in our midst, in order that we may see what speculative philosophy may do with some of our raw facts. How far the imagination is to assist the scientific investigator it is impossible to declare, but it may perhaps have had a share in developing our Darwin or our Tyndall. With Hinton, his papers in the *Medico-Chirurgical Review* and *Cornhill Magazine*, although based on physical facts and laws, are speculative in the highest degree. They all show a train of thought which forbad him to grovel with details, but obliged him to link together and endeavour to harmonise the facts which he found in all dominions of nature. It is this which interests us—being the tendency of our modern thought. He knew not one 'ology from another, seeing they were but fictions of man's creating, but that all departments of nature were bound together by the same universal laws. The main idea current throughout his writings had reference to his views of life—the greatest of all problems requiring solution,—and he always spoke of his indebtedness to Coleridge for affording him the true interpretation of this great mystery. Coleridge had regarded life to be an all-pervading essence, but more concentrated or "individualised" in man. Man therefore became the possessor of consciousness, and obtained of necessity an erroneous idea of the living world around him. That the whole world, organic and inorganic, was living, was the centre round which Hinton's mind revolved, and pervaded the whole of his writings. The subject is fully developed in "Man and his Dwelling-place." I fear that I have not a full conception of his views, and am not sure that I have ever grasped them, for all his doctrines are very visionary, and his writings "mystic, wonderful."

Scientific in the ordinary sense of the word, as applicable to those who are engaged in the investigation of different departments of nature, he was not. It was the ideal rather than the real which he endeavoured to grasp. He never argued a point, but he discoursed; he was eminently a seer, so that his acquaintances were divided on the question as to whether his writings were little better than oddities, or whether he was not propagating a new gospel which would soon number its countless devotees. It is very difficult to form a correct judgment of men of Hinton's mould, and therefore it is that the world is divided in opinion upon the merits of Irving, Comte, Swedenborg, and their like.

In purely speculative subjects, when a mind is richly furnished with a mass of material gained from nature's storehouse, it is impossible to say how far its visions are gained from a clear insight into nature's depths, or how far they are the creations of a fantastic brain. Time alone can tell. Hinton maintained that the human mind had a power of penetrating into the abyss and unveiling the mysteries there. He one day, whilst discoursing to me on cycles and epicycles, exclaimed "Don't you see?" and on my replying that I did not, he affirmed that such as I could only see a foot before us.

I say I believe it is good for such men to sometimes fall amongst us, for we see what speculative philosophy will do with some of the common facts of human nature; and I do not hesitate to say that the whole tone of Hinton's mind, mystic though it would sometimes be, was kindred to that of some of the best thinkers of the day—I mean in the matter of the uniformity of nature's workings in the organic and inorganic world. If I remember rightly, it was Hinton who maintained how much higher and grander is the investigation of this universal spirit pervading all things than the older and vulgar teleological method which is always seeking for final causes. Of course he ignored the conception of a special vital principle. In his paper on Morphology he shows how growth is influenced by least resistance, and, having the

passage before me, I will quote it as an illustration of the power of generalisation which he possessed:—"The most superficial glance reveals a spiral tendency as a general characteristic both of the vegetable and animal creation, but a minute examination traces it in every detail. The beautifully spiral forms of the branches of many trees, and of the shells which adorn the coast, are striking examples of a nearly universal law. But the spiral is the direction which a body moving under resistance ever tends to take, as may be well seen by watching a bubble rising in water, or a moderately heavy body sinking through it; they will rise or sink in manifestly spiral curves. Parts which grow freely show it well, the horns of animals or the roots of seeds when made to germinate in water. The expanding tissue, compressed by its own resisting external coat, wreathes itself into spiral curves. The formation of the heart is an illustration of the law of spiral growth."

I should say that Hinton had latterly devoted himself to social subjects and to the art of painting, on both of which topics he has written largely. His predilections might be anticipated from his turn of mind, and he might be known to be an interpreter of Turner and of the modern school of French landscape. When the British Medical Association met at Birmingham I went into the town Museum, and there saw Hinton gazing rapturously at a misty sunrise of Turner, when, seeing me, he exclaimed, "Good God! how did he do it?" It was in the afternoon of the same day when, not meeting him at any of the medical sections, he told me that he had been having a most interesting two hours' conversation with Father Newman. Hinton's views of living nature were those which animated his writings and his own existence. He was accustomed to say that he was perfectly indifferent as to whether he died the following day, and then he would declare that he was beginning a new life in order to regenerate his race. Life and death were to him all the same, as part of his philosophy; and now, contemplating his unexpected end, I am reminded of his own words: "It is a wonderful thing—Life—ever growing old, yet ever young; ever dying, ever being born; weakest and strongest of the things that God has made. Life is the heir of Death, and yet his conqueror. Victim at once and Victor. All living things succumb to Death's assault; Life smiles at his impotence, and makes the grave her cradle."

Hinton's purely medical history can soon be told, but his inner life, with the products of his deepest and fondest thoughts, would form a biography of an intensely interesting character. He has many friends imbued with his philosophy, who will no doubt undertake the task. For myself I have written longer than I intended, but the excuse must be that a lamented colleague is my theme.

Your obedient servant,

Grosvenor-street, Jan. 2, 1876. SAMUEL WILKS.

"OVERWORK."

To the Editor of THE LANCET.

SIR,—Will you allow me, in pursuit of the very interesting and important question discussed by Dr. Farquharson in your last number, to suggest the following considerations, which possibly may help to throw light on the pathological enigma he proposes for solution at the close of his remarks.

In brief, I understand the case sketched to be that of a habitual brain-worker attacked with cerebral irritation, rapidly ending in collapse. Mental prostration ensues. With the aid of rest and proper treatment bodily health returns; the patient even becomes robust, but the mind is permanently weakened, and its powers of continuous work impaired. Dr. Farquharson asks "those who have devoted special attention to nervous diseases, what is their view of the pathology of such cases"? In reply I beg to submit—

1. The reproductive power of cell-life in a tissue, although very great, is not unlimited, and sooner or later becomes exhausted. Its duration probably depends partly upon the initial force imparted to it by the parent organism, and partly upon the general powers of nutrition in the individual. The law of healthy development by healthy use no doubt plays an important part in the determination of the vital result. But in spite of the most favourable conditions there inevitably comes a time when the reproductive power of a tissue is exhausted, and waste by use is no longer compensated by the generation of new cells. Speaking generally, the reproductive power is lowest in those parts of the organism which are lowest in the gradation of organic life, and it rises with that gradation, from teeth to nerve-tissue. We need not stay to discriminate between the longevity of commissural fibre and ganglionic substance.

2. Like every other form of force present or expressed in the living organism, the power of reproduction by which the waste of cells in use is compensated may be prematurely exhausted. This can and does happen in a particular tissue, while the body as a whole prospers and the function of general nutrition is apparently well performed. Sometimes general nutrition even seems to proceed with increased vigour when the reproduction of a special tissue has been reduced or arrested. Either there is more free force in the body available for general purposes, or the supplies are no longer diverted in a special direction—to the improvement of the organism as a whole.

If these observations be accurate, with the correlative facts and conditions implied, I see no difficulty in accounting for the phenomena described by Dr. Farquharson in a case of permanently impaired brain-power. The recuperative force of the cerebral organism has been seriously exhausted by overwork or excessive use; the general health improves, the nervous irritation is subdued, but the brain-tissue is no longer capable of replacing the cells consumed in active mental exercise with the old celerity or to the previous extent. Probably the organ is still able to do excellent service, but it must be worked like an old horse instead of a young one; with longer intervals of rest, with less free use of the whip, and with better and more carefully adapted food. Meanwhile the general health may be good, and, if it is only the reproductive power of brain-tissue which has been exhausted, the body as a whole may thrive even better than before. There is commonly a tendency to the development of fat, when nothing better can be produced. So that, without evidence of what, for want of a more scientific term, is known as "fatty degeneration," there may be a considerable accession of fat to the external frame, and probably some substitution of this comfortable, but not highly organised, tissue for superior structures within.

I confess Dr. Farquharson does not appear to me to attach quite sufficient importance to the injury inflicted on brains and the impairment of brain-power caused by "overwork." Without doubt Dr. Wilks is fully justified in attributing the largest proportion of mental "disease"—so-called—to want of proper mental exercise. No part of the organism can flourish which is not duly worked; but too much, too early, and too rapid work is as bad as a deficiency of healthful exercise, and produces not less disastrous results.

I am, Sir, your obedient servant,

JOSEPH MORTIMER GRANVILLE.

Scientific Club, Savile-row, Jan. 4th, 1876.

THE LONDON COLLEGE OF PHYSICIANS AND THE TITLE OF "DOCTOR."

To the Editor of THE LANCET.

SIR,—I see by a report of the proceedings of the College of Physicians in your last issue that the College is contemplating a step most derogatory to its status and most unfair to the universities. It proposes to style those of its members and fellows who are not graduates of any university by the title of Doctor. Now, Sir, this is an imitation of the wretched example set by the Edinburgh College some years since, which was followed by no little scandal and damage to the profession. The College of Physicians has no power, as it well knows, to confer the title of Doctor. The distinction which it proposes to make between "graduate" and "non-graduate" members and fellows, by the addition of the letters M.D. after the names of the former, is one that will not be recognisable except under rare circumstances, and it will certainly not be appreciable by the public.

The College, too, will surely pause before usurping the prerogative of the universities. Hitherto the College qualifications have been sought on account of their real worth. If the College takes the step now recommended to

it, it will have done something in favour of the creation of "bogus" in England, and will bring upon itself the deserved contempt of all right-thinking men.

Yours faithfully,

January 6th, 1876. F.R.C.P.

To the Editor of THE LANCET.

SIR,—It is with feelings akin to dismay I have read a statement in a recent number of your journal to the effect that the Royal College of Physicians of London is seriously discussing a proposal to rescind the regulation which prohibits its fellows, members, and licentiates from calling themselves, and being called, "Doctors." There must surely be some mistake. If it be the fact—which I take leave to doubt—that any considerable number of men have taken the qualification of the London College with a view to obtain some excuse for the assumption of a spurious title, it is equally true that many, myself among the number, took that qualification because it gave, or was supposed to give, a better status to the general practitioner or army surgeon than the licence of the Apothecaries' Company, while it was wholly free from that suspicion of humbug that clung to the licences granted by the R.C.P. Edin. and the K. and Q.C.P. of Ireland, which corporations arrogated to themselves the functions of a Senatus Academicus, and affected to endow their alumni with the title of "Doctor." I feel sure not a few of the holders of qualifications issued by the London College will feel indignant at the passing of any regulation which shall lower that College to the level of the like bodies in Scotland and Ireland. In their name and my own, I ask leave to protest against a breach of faith with the men who fifteen or twenty years ago preferred a licence in medicine honourable in its character and honest in its consequences. For myself, the College is welcome to my diploma if the proposed measure is carried into effect.

I remain, Sir, your obedient servant,

January 6th, 1876. AN OLD L.R.C.P. Lond.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on Dec. 30th:—

Budgett, John Alfred Henry, Backchurch-lane.
Woollett, Charles Jerome, Monmouth.

The following gentlemen passed the Primary Professional Examination on the same day:—

Geo. Amos Duke and Octavius Mark White, St. Mary's Hospital; Thos. Franklin Pedley, Guy's Hospital; James Edward Schöe, Middlesex Hospital; Augustus Hewett and John Francis Wood, St. Bartholomew's Hospital.

MR. MITCHELL HENRY, M.P. for Galway, has subscribed fifty guineas to the Free Medical Scholarships of Epsom College, through the acting treasurer, Dr. Carr.

BUILDING ON RUBBISH.—The Home Secretary has addressed a letter to the Hackney District Board of Works intimating that he had written to the President of the Local Government Board to ask him to join him in receiving a deputation from metropolitan local authorities on the subject, much complained of, of the evils occasioned by the practice which prevails in the outlying districts of the metropolis of building houses on foundations of house refuse.

THE LONDON EXHIBITION OF SCIENTIFIC INSTRUMENTS.—The Crown Prince and Princess of Germany received the leading German scientific men on Tuesday, in order to confer upon the means of securing an adequate representation of Germany in the exhibition of scientific instruments to be held in London next May. Besides Doctors Achenbach and Falck, the Ministers of Commerce and Education, there were present Herren Kirchhoff, Dubois Reymond, Dove, and Foerster, as professors of physical science; Herren Hoffmann and Maghellans, as chemists; and Herren Reuleaux and Siemens as representatives of mechanical science. Professor Owen represented the London committee. A German committee was formed to promote the objects of the meeting.

CRIMINAL LUNATICS.—The "Solicitors' Journal" states that, in the various asylums, hospitals, and licensed houses throughout the kingdom, there were in 1873 4853 criminal lunatics under confinement. Of these 559 were at Broadmoor, 197 at county asylums, and 61 at provincial licensed houses. The number under detention at the commencement of the year was 679; 169 were committed during the year, and 5 were received from other asylums. Of these 86 ceased to be criminal (their term of punishment having expired), 34 died, 3 escaped, 17 became sane and were removed or discharged, 15 were removed for trial or punishment, and 7 were sent to other asylums; so that 691 remained under detention at the end of the year. The total number under detention in 1874 was greater by 16 than in 1873. The average cost per head in the State asylum at Broadmoor amounted to £57 18s. 10d., against £61 16s. 10d. in 1873. For the 41 county asylums in which criminal lunatics were under detention, the average cost per head was £26 14s. 6d.; and for 7 city and borough asylums the average was £33 6s.

Medical Appointments.

BARBER, O., M.R.C.S.E., has been appointed Surgeon for the Ecclesall Division of the Borough of Sheffield Police.

BARROW, A. B., F.R.C.S.E., has been appointed a Surgeon to the Westminster General Dispensary, Gerrard-street, Soho, vice Middlemist, resigned.

BULLOCK, H., F.R.C.S.E., has been appointed Medical Officer of Health for the Heston and Isleworth Urban Sanitary District.

COOPER, A., M.R.C.S., has been appointed House-Surgeon to the Male Lock Hospital, Dean-street, Soho-square, vice Tilbury, whose appointment has expired.

CRIPPS, W. H., F.R.C.S.E., has been appointed a Surgeon to the Great Northern Hospital, vice Lowne, resigned.

CUNNINGHAME, R. J. R., M.D., F.R.C.S.Ed., has been appointed Conservator of the Museum of the Royal College of Surgeons, Edinburgh, vice Pettigrew, appointed Professor of Medicine at the University of St. Andrews.

DUFFEY, G. F., M.D., F.K.Q.C.P.I., has been appointed Physician to the National Institution and Molyneux Asylum for the Blind of Ireland.

EWART, W., M.R.C.P.L., M.R.C.S.E., has been appointed House-Physician to the Addenbrooke Hospital, Cambridge, vice Banham, resigned.

GIBBONS, R. A., M.B., C.M., M.R.C.S.E., has been appointed House-Surgeon to the East Suffolk and Ipswich Hospital, vice Turnell, resigned.

GILLIES, H., L.F.P. & S. Glas., L.M., has been appointed Parochial Medical Officer for Kilninver and Kilmelfort, Argyleshire, vice M'Gillivray, deceased.

HALL, F., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Hainton District of the Louth Union, and the Wragby District of the Horncastle Union, vice Wrangham, deceased.

HARVEY, C. W., M.B., L.R.C.P.L., M.R.C.S.E., has been appointed Assistant Medical Officer to the Berks County Lunatic Asylum, Moulsford, vice Urquhart, resigned.

JACKSON, H., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the No. 2 District of the Barnstaple Union, vice Harper, resigned.

LEPPER, Mr. R. J., has been appointed House-Surgeon and Apothecary to the Northern Infirmary, Inverness, vice Fraser, resigned.

M'LEOD, Mr. A. W., has been appointed Assistant House-Surgeon to the Dumfries and Galloway Royal Infirmary, vice Lorraine, resigned.

MARSHALL, J., M.R.C.S.E., has been reappointed Medical Officer and Public Vaccinator for No. 5 District of the Chelmsford Union.

MAY, E. H., M.R.C.S.E., has been appointed Medical Officer to the London Female Penitentiary, Pentonville, vice Griffith, deceased.

MILNE, Mr. J. M., has been appointed Public Analyst for Dumfermline: £5 5s. per annum, 6s. per analysis, and 10s. 6d. per hour for attendance in court when necessary.

PRINGLE, J., M.B., L.F.P. & S. Glas., has been appointed Medical Officer and Public Vaccinator for the Parish of Lismore and Appin, Argyleshire, vice M'Kelvie, appointed to the Lorn Combination Poorhouse and the Parish of Kilmore and Kilbride.

ROONEY, J., L.K.Q.C.P.I., L.R.C.S.I., L.M., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Athboy Dispensary District of the Trim Union, Co. Meath, vice Atkinson, resigned.

SCOTT, H. M., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Easkey Dispensary District of the Dromore West Union, Co. Sligo, vice Mahon, resigned.

SHAW, G. H., M.R.C.S.E., has been appointed Surgeon for the Attercliffe Division of the Borough of Sheffield Police.

STEVENS, J., Ext. L.R.C.P.L., M.R.C.S.E., has been reappointed, temporarily, Medical Officer and Public Vaccinator for the St. Mary Bourne District of the Whitchurch Union.

BOOKS ETC. RECEIVED.

Mr. Maunder: Surgery of the Arteries.
Atlas of Diseases of the Skin.
Messrs. Preece and Sivewright on Telegraphy.
Mr. Morse: First Book on Zoology.
Van Beneden on Animal Parasites.
Medicinal Plants. Part IV.
Mr. Legg: Wills of their Own.
Mr. Grohman: Tyrol and the Tyrolese.

Births, Marriages, and Deaths.

BIRTHS.

ALLEN.—On the 29th ult., at Hall-street, Dudley, the wife of M. S. Allen, M.R.C.S.E., of a son.

COWERS.—On the 31st ult., at Queen Anne-street, the wife of W. R. Gowers, M.D., of a son.

JALLAND.—On the 28th ult., at Bootham, York, the wife of W. H. Jalland, F.R.C.S.E., of a daughter.

MYLES.—On the 1st inst., at Sunfield, Colehill, Co. Longford, the wife of John T. Myles, L.R.C.P.Ed., of a son.

SCATLIFF.—On the 27th ult., at Charlotte-street, Brighton, the wife of John M. E. Scatliff, M.B., of a son.

THOMAS.—On the 28th ult., at Bradford-street, Birmingham, the wife of Wm. Thomas, F.R.C.S.E., of a son.

TYLECOTE.—On the 26th ult., at Sandon, the wife of John H. Tylecote, M.D., of a daughter.

MARRIAGES.

CHOWN—GAMBLE.—On the 28th ult., at Victoria-street Church, Derby, Joseph W. Chown, M.B., to Annie Maria, daughter of Chas. Gamble, Esq.

RATTON—HOLROYD-DOVETON.—On the 7th ult., at the Catholic Cathedral, Madras, James J. L. Ratton, M.D., Madras Army, to Marie Adolphine, only daughter of the late Brevet Lieut.-Col. Holroyd-Doveton, Madras Army.

DEATHS.

BROWN.—On the 4th inst., at Kennington-park, Thomas Brown, M.D., aged 51.

CANNELL.—On the 23rd ult., at Accrington, John Cannell, M.D., aged 34.

EDWARDS.—On the 1st inst., at Sparkbrook, Birmingham, John Edwards, M.D., aged 48.

M'KEAND.—On the 29th ult., at Oxford-road, Manchester, Joseph M'Keand, M.R.C.S.E., aged 51.

MOORHOUSE.—On the 26th ult., at West Broughton, Lancashire, Henry Moorhouse, L.R.C.S.I., aged 33.

RUDDOCK.—On the 23rd ult., at Reading, E. H. Ruddock, M.D., aged 53.

SMITH.—On the 10th ult., at Wark, Northumberland, Wm. Beattie Smith, L.R.C.S.Ed., aged 67.

WILLIAMS.—On the 26th ult., at High-street, Bangor, Owen Thos. Williams, L.R.C.P.Ed., M.R.C.S.E., aged 32.

WILSON.—On the 31st ult., at Denton House, Elphinstone-road, Southsea, Hants (the residence of his brother, Thos. G. Wilson, Staff Surgeon R.N.), Robert Wilson, M.D., Surgeon-Major Madras Army, aged 48.

WRIGHT.—On the 3rd inst., at Markfield, Leicestershire, Samuel Wright, M.R.C.S.E., aged 74.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

SALICYLATE OF SODA.

FURTHER observations on this salt as an antifebrile remedy have been published by a physician to the Berlin Metropolitan Hospital. Dr. Riess has used it with more than 400 patients, and speaks very highly of it as reducing abnormal temperatures with great certainty in doses of 5 grammes, and in children of six to twelve years in doses of 2·5 grammes of the acid. Twenty-three experiments on seven healthy persons showed constant reductions of temperature of 0·9° centigrade on an average within four to six hours. After doses of 5 grammes repeated over several days, the abnormal temperature generally lasted through the whole intervals. In contradiction to others, Dr. Riess did not observe any influence on the pulse. Even in 260 cases of typhoid fever, in which the decrease of temperature was most marked, more so than in the healthy subject, no important effect on the pulse was noted. Frequently, however, profuse perspiration followed in one or two hours, often a quarter or half an hour after the full dose, coinciding generally, but not always, with a rapid decrease of the body heat. Cold baths (15 to 20° centigrade) strengthened the effect of a single dose in the same way as if repeated doses had been given. The antipyretic effect of the drug appeared to be in inverse proportion to the fatality of the cases; and though the mortality was 63 in 260, or 24·2 per cent., Dr. Riess contends that the convalescent patients had derived marked and early improvement from the effected decrease of temperature. Quick and important reductions were also obtained in cases of pneumonia (sometimes from 40 to 35° centigrade and less), in acute rheumatisms, erysipelas, and thirty-two cases of phthisis. In two cases of ague, one or two doses of salicylate of soda mastered the disease quickly; in two others, three or four doses were required; but in five others the attacks could be checked only by quinine. The two following forms were made use of: Salicylic acid, 5 grammes; phosphate of soda, 10 grammes; distilled water, 50 grammes;—or salicylic acid, 5 grammes; carbonate of soda, 5 grammes; distilled water, 50 grammes. Generally unpleasant accompanying effects have not been observed; sometimes slight affection of the head, tinnitus aurium, and dimness of sight occur after the full dose; vomiting is very exceptional, and never caused the use of the drug to be discontinued. No burning sensation is felt, with the watery solution of the salt, in the mouth or pharynx.

SYPHILITIC AFFECTION OF THE SUBLINGUAL GLAND.

M. FOURNIER, the eminent Paris syphilographer, has submitted to the Surgical Society the case of a man, aged thirty, who presented a tumour of the floor of the mouth, which interfered with mastication and articulation. The patient had been treated by M. Fournier eleven years previously for an infecting chancre, and this led to the suspicion that the enlargement of the gland might be due to syphilis. A specific treatment was at once begun, and the swelling rapidly disappeared. Some exception was taken to M. Fournier's diagnosis by several members; but M. Verneuil, who had to report on the paper, observed that the case was important, as syphilis was supposed to spare salivary glands, the mammæ, the ovaries, the thyroid gland, &c. He considered that more stress ought to be laid on the chronicity and appearance of the neoplasm than on the syphilitic antecedents, and that the rapid effects of the iodide of potassium were quite conclusive as to the nature of the tumour.

L. C.—Have nothing to do with such a person.

HERNIOTOMY.

To the Editor of THE LANCET.

SIR,—I read with great interest Mr. Rushton Parker's case of herniotomy, published in THE LANCET of Dec. 18th. The successful return of so large a mass of omentum, attached by so narrow a pedicle, which pedicle must have been compressed by the neck of the sac to the same extent as the strangulated intestine, is, I think, rather unusual. The secret of the success lies, I fancy, as in many other such cases, in the promptitude which characterised Mr. Parker's procedures. I have had a successful case of herniotomy myself lately, of which, as it presents one or two points of interest, I send you the particulars.

Mrs. C——, aged thirty-eight, became ruptured about three years ago, and after it had lasted about a year she purchased a truss; but, owing to great natural delicacy, she never consulted a medical man, and was never properly measured for it, and so, in consequence of its not fitting properly, she has always found that at times the hernia was apt to come down under it—a common tale. She said also, most positively, that the rupture never went up entirely under any circumstances, something always remaining of the swelling; but the return of what did go back was always followed by the complete relief of any symptoms which might have accompanied its descent. Her bowels are usually very confined, being opened on an average two to three times a fortnight, and she has been long subject to occasional attacks of sickness.

On Nov. 21st, between seven and eight P.M., she was seized with acute pain in the abdomen, followed in an hour by vomiting; both symptoms got rapidly worse, and at 3 A.M. I was called up to her. No mention was made to me of the rupture; but, whilst examining the abdomen, my hand came in contact with the spring of a truss, and removing the pad—a large inguinal one—I found a small, tense, impulseless femoral hernia on the right side. By a prolonged trial I reduced about two-thirds of it, and the swelling became quite flaccid; but during the quasi-reduction I was aware of no gurgling, and the little which remained felt like intestine. I ordered total abstinence from food, absolute rest, and gave a mixture containing opium.

22nd.—10 A.M.: Pain and vomiting have continued ever since I saw her, and are getting worse; hernia as large and tense as when I first saw it. I tried reduction long and carefully, also placing her in the inverted position, with exactly the same result as before. After this she was easier, and kept the medicine down.—12.30 P.M.: Still much easier, but hernia larger again.

23rd.—All the symptoms worse than ever, even medicine vomited; hernia larger and tenser than ever; has never passed wind per anum since the commencement.—11.30 A.M.: Drs. Morris and St. Clair met me in consultation, and, having put her thoroughly under chloroform, both tried taxis, with exactly the same result as before—i. e., the reduction of about two-thirds of the swelling. I informed them of my previous experience, and advocated immediate operation; but, as the vomiting was not stercoraceous, and she did not seem *in extremis*, both recommended a little longer delay, and Dr. Morris, injections, castor oil, and opium.

24th.—No improvement; in fact, worse. At 12.30 P.M. Dr. Morris and I met again, and were quite agreed as to the necessity of operating at once. Dr. Morris gave chloroform, and I operated in the usual way. I made an attempt to divide the stricture without opening the sac; but as Dr. Morris was almost entirely occupied in giving the anæsthetic, and I had no other assistant to even dab a sponge, the attempt was not perhaps a very *bona-fide* one; so I opened the sac, and a gush of serum occurred. I then found at the upper corner of the sac a small knuckle of chocolate-coloured intestine, which presented such an appearance that both Dr. Morris and myself felt quite certain it could not possibly have been reduced since the commencement of the symptoms. The neck of the sac was very small and tight, and great difficulty was experienced in getting the director through; this having been accomplished, I rather freely divided the neck of the sac, which was almost like sawing through leather. Immediately upon withdrawing the knife, a brisk gush of arterial blood came right out of the neck of the sac, and I felt myself in a very unenviable position. I withdrew the director, and gave the bowel a touch, when it immediately slipped up. The hæmorrhage continued very free, the blood coming right out of the neck of the sac; but gradually I noticed that it was changing to a venous hue, then it became quite venous, and merely welled up, and then ceased. As the favourable aspect of the patient seemed to preclude the idea that the blood was escaping into the peritoneal cavity, I brought the edges of the wound together with horsehair sutures, leaving a small aperture for drainage.

Every symptom ceased after the operation. The patient made an uninterrupted recovery, and the wound was quite healed and she sitting up by Dec. 15th. The bowels were not moved till the fifth day, but she passed wind per anum within twelve hours after the operation. With regard to this last point, I may mention that I attribute considerable importance to the absence of the downward passage of wind as evidence of obstruction of the intestines, and think it much more important than the presence of belching. Physiologists are all but silent upon this subject; but, from my own inquiries, I think it certain that nearly all people pass wind downwards at least three or four times in the twenty-four hours, and I believe the cessation of this natural discharge to be one of the most constant, persistent, and invariably present symptom of intestinal obstruction.

Yours obediently,

Blackpool, Dec. 21st, 1875. WM. HARDMAN.

TRICHINIASIS.

LATELY we gave an account of some researches on the frequency of trichinæ in America. In a small book on the Animal Diet of Man, from a sanitary and market police standpoint (Berlin 1875, published by A. Hirschwald), by Prof. Gerlach, the Director of the Prussian Veterinary College, we find some statistics of the number of hogs found infested with the worms on microscopical examination during the years 1864 to 1874. There were in the whole of Germany during these ten years 623 officially known cases, in which the carcasses of pigs were demonstrated to contain trichinæ; in Denmark, during 1865 and 1866, 39 cases could be made out by the author; in Sweden, in 1865, 100; from England the professor notes but one case in 1862, having occurred at Dover. Only in a small number of cases was the discovery made after the disease had broken out amongst men. At least over 600 pigs, he says, have been withdrawn from consumption, and mischief prevented by previous microscopical examination. The cases of trichinæ found in hams, bacon, and sausages are not herein included. In the governmental district of Cassel alone 140 sides of American bacon were found diseased. At Goettingen three per cent. of the imported American hams were seized; also at Hanover in 1873 and 1874, 58 American hams and sides of bacon. At Hamburg, on the authority of Professor Kochne, trichinæ are found several times a week in the imported American hams. Luckily this American pork is strongly salted and *dried*, so that the worms are mostly dead. At Bremen, however, an epidemic has occurred, which showed their vitality. Nearly at all places in which the worms occurred in the pigs, they were also found in rats. In these latter animals they have been detected even in localities where neither pigs nor men were affected. Prof. Leisering at Dresden has found twenty per cent. of the rats from eight different knackeries in the kingdom of Saxony infested with the worms. Prof. Roell, of the Vienna Veterinary College, found amongst 147 rats of the town only one; amongst 47 from the knackeries, 7 with worms. In Austria an ordinance exists by which it is prohibited to keep pigs in the knackeries, lest they might feed on the rats. Prof. Gerlach thinks that it should be applied to all slaughter-houses. He is of opinion that the worms have been imported from China by the Chinese race of pigs. That Dr. Sutton saw such a large percentage of his Indiana patients attacked by and succumb to gastro-enteritis, which constitutes the first stage of the disease, caused by the parental worms liberated from their capsules in the consumed pork, proves a very large number of worms to have existed in the meat. Prof. Gerlach confirms the observation of others, that the degree of intensity in both stages of the disease is always proportionate to the number of worms introduced in the first, and to the number of progeny migrating into the muscles in the second stage of trichiniasis. He also points out that only the direct action of salt on the raw pork kills the worms, and that, at a depth of one or two inches in pickled meat, they do not die before several weeks. Their death is the more certain the drier the meat is kept; pieces laying in brine hold them longer alive. So far trichinæ have been observed in man only in the striated muscular tissue. The Supreme Court of Prussia lately condemned a butcher for manslaughter, who had sold trichinous pork which caused the death of a person, the meat not having been examined microscopically. The judgment of the Court ruled that the butcher was answerable even in a case where no local police ordinance about compulsory examination existed. The objection that the seller had been in ignorance of the noxiousness of the meat was overruled, and a liberating sentence on that account given a year ago by the same tribunal reversed. This last judicial utterance has given great satisfaction to sanitarians and doctors at Berlin, as it is in accordance with principles enunciated by an eminent Berlin forensic professor in the *Vierteljahrsschrift fuer gerichtliche Medicin*, vol. xvii., 1872.

TWO ATTACKS OF SCARLATINA IN ONE PATIENT WITHIN TWO MONTHS.

To the Editor of THE LANCET.

SIR,—As the following case is one of unusual occurrence, I forward you a brief summary of the chief facts from my notes.

Annie C——, aged three years and a half, admitted on Nov. 22nd into the Children's Hospital, under the care of Mr. Geo. Elkington. As there was a distinct history of scarlatinal eruption, sore-throat, &c., six weeks previously, and as the patient was desquamating, she was placed in the scarlatina ward. On admission, the left thigh was much swollen, red, and tender, with other signs of a large collection of pus near the knee. Temperature on admission 104° F.

Nov. 23rd.—Abscess opened antiseptically, about two ounces of thick yellowish pus being evacuated; drainage-tube inserted, and antiseptic dressings applied.

For the next eleven days all went well with the patient; the temperature kept normal, and the abscess closed very quickly, no pus being discharged after the third or fourth dressing.

Dec. 6th.—7 P.M.: To-day the patient has complained of headache and sore-throat, and has vomited several times. Temperature 105° F. A rash, resembling that of scarlatina, visible on chest and neck; intense congestion of throat and tonsils.

6th.—The rash is now fully out all over the body. Morning temperature 103° F.; evening nearly 106° F., with delirium, and it is now evident that she has a very severe attack of scarlatina. From this date she has progressed favourably, like an ordinary case of scarlatina, the rash fading, and followed by desquamation, the temperature being now (Dec. 13th) normal, and the patient's condition very satisfactory. The urine has never been albuminous.

Yours truly,
J. JOHNSTON, M.B.,
Resident Medical Officer.

Birmingham and Midland Free Hospital for Sick Children,
December 13th, 1875.

CONSIDERATION FOR FEMALE SHOP ASSISTANTS.

WE have already said a word pleading for some consideration of the case of poor girls in shops, who are kept standing behind counters for very many hours per day, and sometimes late into the night. The subject was first mooted by Mr. Frederick Smith, of Weston-super-Mare, who continues to help the cause with much energy. Very little thought and ingenuity would provide some sitting accommodation for occasional use when standing is not necessary. The following memorial has been signed by a number of leading practitioners:—

"We, the undersigned, concur with THE LANCET of the 25th September, 1875, in considering the practice of long-continued standing by females to be a frequent cause of physical weakness of a serious character, and a source of great suffering. Moreover, we consider—and we *have no doubt* THE LANCET *would concur with us in this belief*—that, even were an Act of Parliament passed by the Legislature limiting the time of shop labour to *ten* hours per day, it would still be essential that frequent slight intervals of *sitting* should be conceded to female shop assistants."

The memorialists do well to look to employers of labour as well as to the Legislature for the abatement of this great evil, which does not strike casual observers, but is an obvious cause of much injury to young women. A seat that could be conveniently extemporised might compete with a cup of cold water in significance and simplicity.

W. J. G.—Communicate with the Secretary of the College.

NOTES ON FIJI.

To the Editor of THE LANCET.

SIR,—In your last issue you gave a short notice of a paper, contributed to the last Report of the Health of the Navy, by Staff Surgeon Messer, of H.M.S. *Pearl*. Possibly a little more information on some of the points touched upon may be of interest to some of your readers.

The skin disease called in Fiji "coka" or "cok" (pronounced "thok") is not peculiar to that Archipelago, but is, I believe, peculiar and endemic among the islanders of the South Pacific groups. It is frequently to be met with among the Samvans, the Tonquese, the natives of the Radick Chain, and the Marshal and Caroline groups. In Fiji it generally, though not exclusively, attacks children, and indeed no child in a tribe is considered perfectly healthy who has not had it. It consists of innumerable ulcerated tubercles, elevated above the skin, and covering all parts of the body, and its favourite seats are the corners of the mouth, the ala of the nose, and the anus, in which latter position it frequently simulates condylomata. Though non-febrile, it causes considerable constitutional disturbance and general emaciation. If left without treatment, it will last from nine months to three years. The attack acts as a preservative against future ones. It is considered in Fiji as a "bastard small-pox," but why is not easy to say, as the natives, so far as is known, have never had any experience of variola. There is, however, a distinct tradition among both natives and whites to that effect, and possibly it may have some foundation in fact. More probably, however, it is one of a number of opinions that the natives have adopted from the earlier whites who have domiciled in the group at the commencement of this century, and some of which perhaps it would have been better for them never to have heard. "Thok" seems, at any rate, to be a specific disease, and to be contagious both to natives and foreigners. As to treatment, I found most benefit from sulphur vapour, alternating with weak lotions of carbolic acid, and iodide of potash internally.

As regards climate, Fiji is not unhealthy in the same sense as Northern Queensland or Western Africa; but, for all that, it cannot be called a particularly healthy climate, nor do I believe that European children can ever be satisfactorily reared there. The heat, as shown by the thermometer, is not excessive; but it is constant and oppressive, especially in the leeward islands of the group. During four months of the year the trade winds are in complete abeyance. This is the "rainy season," a period of the year when the atmosphere is saturated with moisture, and close and "muggy" to a degree. At this time dysentery and low fever prevail in many parts of the group, and frequently prove fatal to Europeans.

Did space allow, I might give some particulars of an epidemic of influenza which visited Fiji in 1872, and proved very fatal to the natives. Curiously enough, their last epidemic of measles was coincident with a similar visitation in 1875 among the Maories of the North Island of New Zealand.

In conclusion, permit me to say a few words about the "kava" root, which Mr. Messer found so unpalatable. This plant is distributed over most of the Pacific groups, and is usually cultivated by the natives with considerable care. Its botanical name is *Piper methysticum*, and it has been briefly described by Dr. Sieman in his work, "Flora Vitiensis." It possesses some remarkable properties, and, moreover, from its general use, would appear to supply some physiological adjunct to the diet of the people. Its effects on the human body are well marked, and would repay a thorough scientific investigation. In Fiji it is credited with possessing valuable therapeutic properties, and I believe not without reason. It is largely used by the natives, especially the men, as a beverage, much as the Japanese use tea, and is also taken medicinally in cases of gonorrhœa, dysentery, and low fever. An overdose causes partial paralysis of the motor nerves, nausea, and headache, but does not produce the excitement or subsequent coma of alcohol. I confess I cannot understand how Mr. Messer should have attributed to it the cases of delirium tremens he met with, nor can I understand how "kava" could possibly produce such effects. I have seen a great deal of kava drinking, not only in Fiji and neighbouring groups, but also in the Island of Rotumah, where an unusually strong decoction of the plant is used by the natives, and where the bad effects of an overdose of it can be studied to advantage. In old kava drinkers the habit produces trembling of the hands, a scaly state of the skin, inflamed conjunctivæ, and, I believe, in many cases pterygium. I may add that I have brought some specimens of the plant to England, and that Dr. Dupré has kindly undertaken to prepare an extract from it. With this I propose to institute some physiological experiments, the results of which I shall hope to submit to the profession shortly.

Finally, permit me to refer any of your readers who may be anxious to learn what sort of a place Fiji is to settle in, to a work by me, entitled "Two Years in Fiji" (Longmans, 1875), or to a series of papers on the Ethnography of the Group in the *New South Wales Medical Gazette*, 1870.

I remain, Sir, yours &c.,
LITTON FORBES, F.R.G.S., &c.,
Late Medical Officer to the British Consulate,
Jan. 4th, 1876. Leonka, Fiji.

HARVEY.

DR. J. H. AVELING has published in a pamphlet form some memorials of Harvey, with the view of adding something to the materials for forming a more perfect estimate of that great man, in anticipation of the tercentenary of his birth. They consist of letters or extracts from domestic State papers, or from contemporary writers, &c. &c. Some of these are published for the first time, others are not very accessible; all of them are interesting. Dr. Aveling's great object is to vindicate the credit and the originality of Harvey as a gynæcologist and an obstetrician, and in this he succeeds, showing especially how Harvey was the first to invent an instrument to dilate the cervix uteri in cases where it is closed, and how he laid down sound rules for the management of natural and of difficult labours. The views of "Mr. Doctor Harvey" entertained by many of Harvey's contemporaries receive fresh illustration at the hands of Dr. Aveling. If the great anatomist made any mistake in diagnosis or in treatment, they were very severe upon him, and set it all down to his knowing so much anatomy. We cannot forbear to quote a cautious Report of the Health of Prince Maurice, agreed upon by Harvey and the other doctors, who had seen the Prince ill of a fever: "Now the doctors having conferred, and computed the tyme, have good hopes of his recovery, yet by reason that the disease is very dangerous and fraudulent, they dare not give credit to their alliteration. And concluding the disease to be venomous they doe resolve to give very little physick, only a regular dyett and Cordyall Antidotes."

Mr. Herbert Williams. — Apply to Messrs. Baillière, Tindall, and Cox, King William-street, Strand, where the United States Directory may be obtained.

W. B. C. Q.—By all means bring the facts under the notice of the official named. See our editorial remarks on the case elsewhere.

MEDICATED ICE IN SCARLATINA.

To the Editor of THE LANCET.

SIR,—Every practitioner has at times to face the difficulties of the scarlatinal throat in young children. It may sadly want topical medication; but how is he to apply it? Young children cannot gargle, and to attempt the brush or the spray often fills them with terror. In many cases neither sternness nor coaxing avails. If the doctor thinks it his duty at all hazards not to leave the throat untouched, the child is subjected to a struggle and a fright which probably render the proceeding more productive of harm than good. If, on the other and more wiser side, he, when persuasion fails, goes no further, he is haunted by the feeling of not having done all that might have been done for the case. Most of us at times have been impaled on the horns of this dilemma. Yet these little ones in almost every case will greedily suck bits of ice, as I doubt not most of your readers can testify. This has long been my chief resource where I could not persuade the child to submit to the sulphurous acid spray. Lately I have been trying an ice formed of a frozen solution of the acid (or some other antiseptic), and I think my professional brethren will find it a valuable addition to their means. Though, of course, not so tasteless as pure ice, the flavour is so much lessened by the low temperature, and probably also through the parched tongue very little appreciating any flavour whatever, that I find scarcely any complaint on that score from the little sufferers; they generally take to it very readily. The process of making it is so simple that a few directions to any intelligent nurse will quite suffice; or in urban practice the chemist who dispenses the other prescriptions will undertake this one also. A large test tube immersed in a mixture of pounded ice and salt is the only apparatus required, and in this the solution is easily frozen. When quite solid, a momentary dip of the tube in hot water enables one to turn out the cylinder of ice as the cook turns out her mould of jelly. I have tried the three following formulæ, all of which answer, though I think I prefer the first:—

1. Sulphurous acid, half a drachm; water, seven drachms and a half: mix and freeze.
2. Chlorate of potass, one scruple; water, one ounce: dissolve and freeze.
3. Solution of chlorinated soda, half a drachm; water, one ounce: mix and freeze.

However, the form is of secondary importance, as each practitioner can construct his own. Boracic acid, salicylic acid, or any other harmless antiseptic with not too much taste, would, doubtless, be as useful as those I have indicated. It is the idea of applying them in the shape of "medicated ice" that I recommend to the profession, with the belief that it is of practical value.

Yours truly,

Weston-super-Mare, Dec. 27th, 1875. EDWARD MARTIN.

Dr. J. C. Reid.—Our correspondent does well to write to enlighten the public on the question of vaccination. But let him not be too sanguine of producing any effect on anti-vaccinationists. Argument is thrown away upon them. It is lamentable to see a paper like the *Northern Daily Express* admitting such nonsense as that of a "Novocastrian" into its Local Notes. But a "Novocastrian" does not do so much harm as he intends. His love of theories and his war with facts are too apparent even for ordinarily intelligent people. Vaccination palpably protects from small-pox. In the Small-pox Hospital, where every nurse is *revaccinated* on entrance, no case of small-pox in a nurse has occurred for thirty years. Those who content themselves with only one vaccination may have the disease; but in them it is fatal only to the amount of 7 or 8 per cent., instead of 45 per cent. as in the wholly unvaccinated. These are facts. The conveyance of other diseases by vaccination is so rare an event that few medical men have seen it. But again let us warn Dr. Reid against expecting facts to have any weight with anti-vaccinationists.

Mr. Laffan.—The information may be obtained on application to the Secretaries of the various Societies.

THE ALKALOID OF JABORANDI (HYDROCHLORATE OF PILOCARPINE).

EXPERIMENTS have been made in the Paris hospitals with this alkaloid, discovered by M. Ernest Hardy, and the process of extraction improved by M. Duquesnel. The principle of jaborandi may be given in doses of from three-quarters of a grain to two grains. A little more than one grain has been found sufficient by Dr. Pierre Dumas, who has made this alkaloid the subject of a thesis. The former seems to have an action almost analogous to that of the jaborandi-leaf; but the diaphoresis is less complete than the salivation, which latter is considerable, and connected with vomiting. This alkaloid has been used in cases where jaborandi is generally prescribed, and with the like effects. The urine does not seem much modified by the use of the alkaloid, but the proportion of its acid is diminished.

EXTENSION OF UNIVERSITY TEACHING.

IN the term just concluded, the scheme for establishing local university teaching in the large towns appears to have met with gratifying success throughout the country. Since the corresponding term last year the movement has received an accession of fifteen towns, while the number of students has, we understand, more than doubled. Yorkshire especially has profited by the plan, that county having contributed nearly one-third of the total of 7000 students.

Philochemicus.—Some simple methods for water analysis were described in THE LANCET of July 13th, 1872. The method described by our correspondent is worthless.

THE RESIDENCE CONDITION OF BRITISH MEDICAL GRADUATION.

To the Editor of THE LANCET.

SIR,—Your correspondents, "Omega," "Alpha," "L.R.C.P. Lond.," and "M.D., M.R.C.S.," seem to think it is absolutely impossible for a gentleman in practice, however learned, to obtain a British M.D. without long residence. I believe they are mistaken, and that if they will apply to the Junior Dean, Trinity College, Dublin, they will find that they may, by merely passing several examinations at considerable intervals of time, obtain the much-coveted M.D. It necessitates, as at Oxford, the taking of the B.A.

One of your correspondents wants a respectable B.A. Nothing is easier than to obtain it—i. e., if he have the requisite knowledge. The University of London will give it to him after three examinations, and the University of Dublin, I believe, after six. He can also obtain the degree of M.A., after a single examination, from the Archbishop of Canterbury.

Occasionally medical men, wanting degrees, have taken appointments or practices in Oxford or Cambridge, and have thus succeeded. Prof. Humphry himself passed through his undergraduate course while he was in practice.

Most of the letters I read in the medical journals from practitioners who lack degrees indicate that the writers are perfectly ready to undergo the severest examination (such, I suppose, as the five examinations for the London M.D. in one!); but they seem to forget that they had an opportunity of passing these during their student days, when probably they knew more about the subjects, of the first three of them at least, than they do now. Surely they must have known when they were young that *that* was the time for obtaining degrees. Many a clergyman, many a schoolmaster, bitterly regrets that he missed the opportunity of taking a degree in early life.

I cannot help saying that I think London might fairly extend the system of non-residence to medical degrees, so that any qualified man might be admitted to the examinations without producing certificates of medical study in the intervals.—I am, Sir, yours truly,

Dec. 28th, 1875. A GRADUATE OF LONDON AND CAMBRIDGE.

PROSTITUTION IN VIENNA.

THE editor of the *Allg. Wiener Med. Zeit.* is publishing a series of articles on this subject, the first appearing in the number of Dec. 21st. It would seem that examinations are carried on in a very imperfect manner, owing to the miserable remuneration of the medical men, the abject state of degradation in which the wretched girls are found, and their dislike of the ordeal. In the ten districts of Vienna 1400 prostitutes are on the books; but it is notorious that fully 20,000 women are carrying on prostitution as a means of livelihood. As in Paris, it is most difficult for the police to reach clandestine prostitution; but even the registered girls cannot be properly watched, as the number of medical men appointed is inadequate to follow in their different abodes the women who are to be examined twice a week.

SLADE'S ANTI-ASTHMATIC CIGARETTES.

MR. SLADE, English and French Pharmacien, of Long-acre, has forwarded for our inspection samples of his anti-asthmatic cigarettes. Smoking certain medicinal herbs has long been a favourite, and, we must add, a frequently effectual mode of allaying the spasmodic irritability of that very troublesome disease, asthma. The basis of most of these preparations is probably stramonium; but we are not told the composition of Mr. Slade's cigarettes. They are well made, and enclosed in bottles, containing full directions for use. Relief from the urgent symptoms of a paroxysmal attack may often be obtained by these cigarettes.

PAINLESS OPENING OF ABSCESSES.

DR. BERGONZINI uses a solution of two parts of carbolic acid with one part of glycerine, and leaves the mixture in contact with the skin for three or five minutes. Redness or swelling never occurs, except the skin had been previously inflamed, or the liquid allowed to remain on too long. This anæsthetic agent might, according to the author, be used in autoplastic operations, and he intends to try it in neuralgia where the seat of the pain is very superficial.

THE MILK OF COWS WITH FOOT-AND-MOUTH DISEASE.

As cases have been reported of late in this country where the milk of cows suffering from the now widespread foot-and-mouth disease had acted injuriously on children, though on chemical analysis no poisonous substance could be found in it, we might remind our readers that in Germany medical men and veterinarians do not doubt the noxiousness of such milk for the use of men, which has been proved by numerous observations. Prof. Gerlach, of the Berlin Veterinary College, states that the sucklings of cows affected with aphthæ generally die, and on post-mortem examination show signs of inflammation, and even formation of aphthæ in the intestine. He saw the disease in a calf which had not been exposed to any other source of infection, but was fed on milk brought from an infected stable. In the milder degrees of the epidemic, the milk, after being quickly boiled, may be consumed by men without evil results; but calves suffer even in such cases. In the more severe cases the meat of cattle affected with aphtha is also considered injurious, and in times of an epidemic the source of veal ought to be especially inquired into.

Mr. Liston.—We have frequently commented on the subject of late, and will probably revert to it again.

WHAT NEXT?

To the Editor of THE LANCET.

SIR,—I was a candidate for the appointment of "Resident Medical Officer" to the Wandsworth and Clapham Union. On the 13th inst. I appeared with other candidates before the "Board," and was much struck on being asked by the Chairman, among other questions, "*Whether I was conversant with the management of a laundry?*" May I inquire of you, Mr. Editor, if the Poor-law Board expect their workhouse medical officers, in addition to their multifarious and onerous duties, to undertake the superintendence of a *blanchisserie?*—I am, Sir, yours faithfully,

JOHN FRENCH BLAKE, L.R.C.P., &c.,
Late Resident Medical Officer, Charing-cross Hospital.

Queen-square, Bloomsbury, Dec. 14th, 1875.

Mr. A. Jukes, (Halifax.)—The proposed system of prosecutions seems to us liable to objection. Societies which have powers of prosecution should not shrink from the implied responsibility of using them. To give a *carte-blanche* to legal gentlemen in different parts of the country to prosecute, on the understanding that they were to make money out of it, and that the Society was to lose none, would be an undignified contract.

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir H. Thompson, London; Prof. Maclean, Netley; Mr. Henry Smith, London; Dr. Wilks, London; Dr. Burrows, London; Dr. Squire, London; Mr. Bond, London; Dr. B. W. Richardson, London; Mr. Fox, Bristol; Dr. Foulis, Glasgow; Mr. R. Lewis, London; Dr. Coppinger, Dublin; Mr. Lamptner, Alford; Mr. Sharp, Walsall; Mr. Taylor, London; Mr. Hayes, Hexham; Mr. Scott, Southampton; Messrs. Lyall and Rennie, Coventry; Dr. Woodward, Worcester; Dr. Winstanley, Blackpool; Mr. Smith, Leeston; Mr. May, London; Dr. Snow, Bournemouth; Mr. Ward, Penistone; Mr. Weir, Nottingham; Mr. Brown, London; Mr. Parmenter, South Croydon; Dr. Stocker, Liverpool; Messrs. Finch and Lush, Salisbury; Dr. Allbutt, Leeds; Mrs. Heald, Leeds; Mr. Pick, London; Mr. L. Forbes, London; Dr. M'Cosh, Dundee; Dr. Ritchie, Edinburgh; Mr. Jackson, Plymouth; Dr. W. Falconer, Bath; Mr. Winzar, Salisbury; Mr. Liston, Oldham; Mr. Davy, London; Dr. Carr, Blackheath; Dr. Senftleben, London; Dr. Tripp, Clifton; Mr. Waterer, Bagshot; Mr. Baker, London; Dr. More, Rothwell; Mr. Wright, Liverpool; Dr. Sisson, Maida-hill; Mr. Williams, Cardiff; Dr. Stephenson, Tramore; Mr. Mason, Wellington; Dr. Young, Liverpool; Dr. Radford, Ben Rhydding; The Brazilian Minister; M.D.; The Registrar-General of Edinburgh; L. C.; Carius; L.R.C.P.L.; S. D.; W. J. G.; Jaborandi; The Manager of the Brighton Aquarium; R. C. P.; C. H.; Z.; A Medical Officer of Health; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Comfield, Buckhurst Hill; Dr. Smith, Clogher; Mr. Clapp, Nantyglo; Dr. Ward, Grange-over-Sands; Dr. Campbell, Staunton; Mr. Griffith, Penygroes; Dr. Dixon, Stockton-on-Tees; Mr. Fisher, Wigan; Dr. Maccall, Crook; Mr. Langdon, Devizes; Dr. Sanderson, Campbletown; Mr. Hargreaves, Armley; Mrs. Crawley; Messrs. Wentzel and Co., Cape of Good Hope; Mr. Murcom, Coniston; Dr. Tuckwell, Oxford; Dr. Lovegrove, Hythe; Mr. Leach, Sturminster Newton; Mr. Scott, Hong-Kong; Dr. Caldwell, Shotts Iron Works; Mr. Macdonnell, Portland; Mr. Knott, Worcester; Dr. Sutherland, Castletown; Mr. Eaton, Cleator; Mr. Kent, Beeralston; Mr. Gibbs, Harrold; Dr. Spencer; Mr. Molyneux, Upholland; Mr. Hall, Wigan; Dr. Miller, East Grinstead; Mr. Williams, Dowlais; Mr. Evans, Swansea; Dr. Tattersall, Woolton; Dr. Duffey, Dublin; Mr. Thomson, Manchester; Dr. Johnstone, Upholland; Dr. Reynolds, Haverhill; Mr. Williams, Talgarth; Mr. Clarke, Lynton; Staff Surgeon Wilson, Southend; Mr. Jackson, Workington; Dr. Walters, Birkenhead; H. S., Holborn; A. Z.; L. R. C. P.; Alpha, Blackburn; W. C., London; J. C.; F. R. C. S.; M. B., Dewsbury; J. D. S.; G., Bury; Medicus, Coventry; A. B., Billericay; Medicus, Gateshead; Surgeon, Llanelly; G. Z. H., Bristol; J. S.; Dr. W.; X. Y. Z., North Shields; Medicus, Borough; Vendor.

Local Government Chronicle, Welshman, Western Morning News, Cork Constitution, Manchester Guardian, Liverpool Post, School Guardian, Rock, Manchester Courier, Newcastle Chronicle, East London Observer, Birmingham Morning News, Irish Times, Rochdale Observer, and *Shrewsbury Free Press* have been received.

METEOROLOGICAL READINGS

(Taken by Steward's Instruments.)

THE LANCET OFFICE, JAN. 6TH, 1876.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radiation in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 9 A.M.
Dec. 31	30·21	S.	40	43	...	47	42	...	Overcast
Jan. 1	30·02	W.	46	47	...	49	42	...	Overcast
" 2	30·25	S.W.	45	49	...	53	33	...	Raining
" 3	30·11	W.	52	53	...	55	39	0·29	Overcast
" 4	30·39	N.W.	45	47	...	49	44	...	Foggy
" 5	30·41	S.E.	33	34	...	38	32	...	Overcast
" 6	30·47	S.E.	33	34	...	35	28	...	Overcast

Medical Diary for the ensuing Week.

Monday, Jan. 10.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Adjourned Discussion on Dr. Lauder Brunton's paper, "On the Physiological Action of Alcohol."

Tuesday, Jan. 11.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Dr. Moss, "On Pathological Absorption Spectra."—Mr. H. T. Butlin, "On the Minute Anatomy of two Breasts, the Areolæ of which had been the seat of long-standing Eczema."—Mr. Gaskoin, "On the Etiology of Skin Disease."

Wednesday, Jan. 12.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
EPIDEMIOLOGICAL SOCIETY.—8 P.M. Council Meeting.—8½ P.M. Dr. Colvill, of Bagdad: "The Report on Plague."

Thursday, Jan. 13.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Jan. 14.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CLINICAL SOCIETY OF LONDON.—8½ P.M. Annual Meeting.—Dr. T. S. Dowse, "On a Case of Thrombosis of Cavernous Sinus; Sudden Loss of Vision; Hæmorrhage into Anterior Lobe."—Mr. Venning, "On a Case of Congenital Tumour."—Mr. C. Heath, "On a Case of Gunshot Wound of the Arm, dividing the Brachial Artery and Median Nerve."

Saturday, Jan. 15.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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